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ORIGINAL ARTICLES

AN HISTORICAL SKETCH OF THE MOVEMENT TO ESTABLISH A STATE SANATORIUM IN MISSOURI FOR PERSONS HAVING INCIPIENT TUBERCULOSIS.*

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The recital of efforts made and failures encountered in attempts to bring about changes affecting the general weal in any existing situation always possesses a human interest, and this is especially true when such needed changes are perceived clearly by but a few, and the number virtually restricted to a single profession or calling—in that case their appeal is often as the voice of one crying in the wilderness unheard or unheeded by those in whose behalf their efforts primarily are made.

Such was the experience of those concerned in the sanatorium movement in this country a generation ago when private individuals sought to attract public and official attention to the open air treatment of pulmonary tuberculosis by means of institutions situated in isolated localities, and dependent for support on the meager income yielded by patients, and the occasional benefactions of well-wishers and friends.

The credit for having effectively brought to public notice the merit of this mode of handling this problem is due in large measure to Dr. Edward L. Trudeau who went into the wilderness in 1873 to save his own life, and in 1884 opened a modest institution at Saranac Lake, New York, he having borrowed the idea from German practice and teaching, Brehmer in particular being his model. Other private sanatoriums followed, and the cumulative favorable influence of their example operating through a decade or more led to official action by Massachusetts in 1895, to whom belongs the distinction of having been the first American commonwealth that devoted public funds to such an enlightened purpose.

Other states imitated more or less closely the example thus set, and in this honorable roll Missouri stands ninth, having been preceded by Minnesota and Ohio—these three being the only inland states that have

*Read by title at the meeting of the Missouri State Medical Association, Excelsior Springs, May, 1905.

taken this advanced official step.

The movement which culminated in this action by the Forty-third General Assembly of Missouri was formally initiated by the Medical Society of City Hospital Alumni of St. Louis at the meeting held on Nov. 21, 1901, when the following preamble and resolutions were unanimously adopted:

> Whereas, The provision by state government of sanatoriums for the reception and care of tuberculous persons has become an acknowledged necessity for the better protection of the public against tuberculosis in its varied forms; and
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> Whereas, Several states already possess such sanatoriums while Missouri, although the fifth state in the Union in order of population, has taken no step toward providing for the establishment of such an institution; therefore, be it
>
> Resolved, That the Medical Society of City Hospital Alumni recognize the urgent necessity for an adequate institution designed for the exclusive care and treatment, both hygienic and medical, of tuberculous persons in the state of Missouri, the said institution to be erected and maintained by the State government.
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> 2. That this Society shall at once, by correspondence and otherwise, seek to enlist the active co-operation of other medical societies and bodies, and of the public press throughout Missouri to the end that a sanatorium, commensurate with the importance of the object sought, be authorized by legislative action, the same to be erected in some suitable location in the mountainous part of the State.
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> 3. That copies of these resolutions be transmitted to all other medical societies in the State, to medical colleges, to the medical press and to the local daily press, to the Governor, and members of the General Assembly; and that a persistent agitation of this subject be maintained in order that public opinion may be so influenced as to secure favorable action by the next legislature toward the more effectual prevention and control by approved methods of one of the most destructive diseases to which mankind is liable.

A special committee, consisting of the writer and Drs. Ludwig Bremer, Louis H. Behrens, Francis Reder and R. B. H. Gradwohl, was appointed to have charge of the work and enlist public and professional interest in the undertaking.

Other medical societies responded favorably, and the next year (Oct. 25, 1902) the St. Louis Medical Society officially recognized the importance of the subject, as follows:

> Whereas, Medical opinion with practical unanimity favors the erection of special institutions, known as Sanatoriums, for the care and treatment of persons having pulmonary tuberculosis in its earlier stages; and
>
> Whereas, The United States Government has established two such institutions, for sick soldiers and seamen respectively, while the States of Massachusetts, Connecticut, New York, Minnesota and New Jersey all either have such sanatoriums now in successful operation, or have enacted legislation to secure the same; and
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> Whereas, The need for such an institution, erected and maintained by the state, is obvious to everyone who is acquaint-

ed with the ravages of tuberculosis among our population; therefore, be it

Resolved: That the St. Louis Medical Society of Missouri, recognizing the present necessity for the employment of all modern scientific and hygienic means and resources of approved value in combating the spread of tuberculosis, would respectfully represent to the State authorities the importance and duty of enacting legislation providing for the erection and maintenance of such an institution in Missouri with as little delay as circumstances permit.

Second: That this Society desires the active co-operation of all other medical bodies, and of the medical profession generally throughout Missouri, in bringing this subject to the careful attention of the Governor and other state officials, and to the consideration of the members of the General Assembly.

Third: That a bill for establishing said institution be prepared and presented to the next session of the General Assembly, urgently requesting prompt action in the premises.

Fourth: That notification of this action be given to all other medical societies and to the press throughout the state.

A special committee of five was appointed by this Society also to forward the object, the committee so appointed being the writer, as chairman, Drs. F. J. Lutz, William Porter, R. M. Funkhouser and W. G. Moore.

The committees of these two societies worked in complete accord and conducted an earnest campaign throughout the state by means of letters and circulars to all local societies, together with appeals for signatures to forms of petition provided addressed to the Forty-Second General Assembly asking for necessary legislation to make the movement effective. The responses on the part of the profession was prompt and hearty, the reorganizing impulse then very generally felt throughout the state, and which has had such a strengthening influence on the State Association, aiding greatly in this respect. Effective help was also rendered by the Missouri State Society for the Prevention of Tuberculosis of Kansas City, the president, Dr. R. O. Cross, visiting St. Louis for the purpose of conferring with the local committee.

A bill was prepared by the joint committee providing for a sanatorium and asking for $150,000, for this purpose. It was introduced in the House February 5, 1903, and referred to the Committee on Eleemosynary Institutions, before which committee Drs. Porter, Funkhouser and the writer appeared at a hearing called for the purpose, and submitted testimony derived from professional experience and official sources in support of the measure.

The committee reported the bill favorably to the House with recommendation that it be referred to the Committee on Appropriations, which was done. No report on the bill being forthcoming from that source, a request for a hearing was finally granted, Dr. Gradwohl and the writer appearing and offering arguments in favor of the bill. The vote in committee, however, was adverse and for the time being nothing further could be done.

The Medical Society of City Hos-

pital Alumni declined to discharge its committee when report of this failure was made, and it was continued, taking up the work again in the fall of 1904 in co-operation with the newly formed standing committee on Public Health and Legislation of the St. Louis Medical Society composed of Drs. R. M. Funkhouser and F. L. Henderson, the writer being chairman.

Much work in preparation for the meeting of the legislature was done, the first named society re-affirming December 15, 1904, the action of 1901, the only change made being in paragraph 2 of the resolutions providing that the proposed institution be in some suitable location "within the territory" of the state, instead of in the "mountainous part," former experience at Jefferson City having shown that sectional prejudices were aroused by that provision.

The St. Louis Medical Society on Nov. 5, 1904, re-adopted its former declaration adding thereto the following section in recognition of the influence of the State Association in its reorganized capacity:

> "Fifth: That the Committee on Public Health and Legislation of this Society be authorized to communicate with all the societies in affiliation with the Missouri State Association with the object of enlisting their influence and support to further the above purposes, and co-operate with the committee of the State Association on Public Hygiene and Legislation."

Following the annual (1905) elections of the two local societies named, the personnel of their committees was somewhat changed the writer being retained as chairman of both —in the Medical Society of City Hospital Alumni committee Drs. Bremer and Reder were replaced by Drs. B. M. Hypes and H. L. Nietert; while in the St. Louis Medical Society committee Drs. Funkhouser and Henderson were succeeded by Drs. John Young Brown and H. J. Scherck.

These committees, again acting jointly and harmonioulsy, pressed the work, and presented a bill which was introduced in the House on Jan. 18, 1905 (becoming Bill 226 on the calendar) by Hon. James Stewart, a physician and Representative from Warren county. The bill was referred to the Committee on Sanitation and Hygiene, Dr. Stewart being the chairman, and, as later favorably reported, provided for an institution for incipient consumptives with an appropriation of $50,000 instead of $100,000, as was asked for.

The bill then went to the Committee on Appropriation, Dr. A. C. Pettijohn of Linn being chairman, and, after considerable delay was reported without recommendation. It was, however, put upon its final passage in the House on March 10 the vote thereon being 81 ayes to 20 nays, all the medical men present voting in the affirmative. It passed the Senate on March 15 without dissent, twenty-eight Senators being present and voting—this result being due in a very considerable measure to the skillful handling of the bill by Dr. Frank DeVilbiss, Senator from the Twenty-seventh District, and chairman of the committee having it in charge.

This enactment was approved by the Governor on April 15, and will become effective ninety days after the adjournment of the Legislature, which occurred March 18, the ninety day period being completed on June 16, 1905.

That the seed sown during the previous years had fallen on good ground was evidenced in part at least by the fact that no opposition of consequence was developed during the session, the consensus of expressed opinion as elicited by the writer on the occasion of his only visit to Jefferson City this year in the interest of the bill made on March 9th, having been entirely favorable.

It may be worth while to point out in this connection the causes that appeared to favorably influence the legislative mind, and to draw some general conclusions therefrom.

As has already been mentioned the general movement in the profession in recent years toward the better organization of its numbers and strength was a factor of the first importance—the time was ripe and the profession responded promptly, and this beneficial work is still proceeding to the manifest advantage of both physicians and the public.

The education of the profession as to the active cause of tuberculosis through the discovery of Koch, together with the spread of knowledge concerning the open air treatment of the disease in this country and abroad, and the extension of this information through popular channels to the people rapidly prepared the way for legislative action in the different States such as the last few years have witnessed.

The physicians connected with sanatoriums, both private and public, very early perceived the educational character and importance of such institutions, being in nature schools rather than hospitals,—that the persons helped or cured there would become missionaries among their fellows, and thus accomplish a leavening of the population mass that would be entirely impossible otherwise; and, added to precept and instruction of practicing physicians in their respective communities, to this influence is due the swift maturing of public opinion on the question of the cause and rational treatment of consumption, and the generally favorable attitude of legislators in this respect.

The facilities afforded by multiplied local societies for obtaining adequate expressions of medical opinion on the tuberculosis problem, and such expressions being communicated directly to representatives in the legislature, was doubtless very effective, for a number of county societies were conspicuous for the energy and decision of their action.

At Jefferson City it was generally conceded by visitors that the quality of the legislative material was above the average, medical men being more numerous than usual, and this element occupied a commanding position in committee assignments, especially in the House.

Another factor that to some extent probably had its influence was the differing partisan complexion of the two branches of the Assembly, each watched the other closely and in the main only measures of

merit withstood the scrutiny to they were subjected.

With a good cause therefore, in these circumstances, success was to be expected, but it was mainly to the advanced thought of the profession and the manner in which this was brought to bear on public opinion that Missouri enjoys the credit of being second in the list of states in the Mississippi valley that has devoted public funds to a campaign of education in the war on consumption; and this success only emphasizes the need for still better organization in order that the contests of the future may be entered upon with full confidence in the justness of the undertaking and reasonable assurance of a prosperous outcome.

THE OCULAR MANIFESTATIONS OF SYPHILIS.*

BY CARL BARCK, M. D.

Of the organs of special sense none is so frequently affected by Syphilis, acquired as well as hereditary, than the eye. The syphilitic lesions of the eye are dealt with under various chapters in the textbooks, on the different topics, therefore it might not be amiss to consider them collectively under a more general aspect. Furthermore I shall not dwell as much on the more frequent and well known affections, but on a number of rarer ones which are not generally known.

The syphilitic eye affections are naturally divided into those due to congenital and those due to acquired syphilis.

Congenital Syphilis.—Hereditary syphilis is easily recognized in children, who present its symptoms immediately after birth. Later in life the diagnosis is not so easy and frequently quite difficult. Our objective diagnosis rests then mainly upon the presence or want of the trials of the socalled Hutchinson's symptoms, namely: Hutchinson's teeth, interstitial keratitis, labyrinthine deafness. To these three a fourth one may be added, which is just as characteristic as any of the other three, namely radiating, whitish scars around the ankles of the mouth and sometimes on the upper lips. It is generally conceded, that, if two of these four typical symptoms are well defined, the objective diagnosis of hereditary lues may rest assured; but from one symptom alone the diagnosis should not be made.

In rare instances we find affections of the lids and of the conjunctiva in form of ulcers and efflorescences due to hereditary lues. On the lids it might lead to loss of the cilia.

Tarsitis in children must always cause suspicion and careful examination. It might lead to enormous thickening of the tarsus, if not correctly diagnosed and treated accordingly. Affections of the lachrymal apparatus are not rarely

*Read before the St. Louis Medical Society, January 27, 1906.

caused by lues; the primary luetic affection is a periostitis or ostitis in the neighborhood of the lachrymal sac and nasal duct by which these are secondarily affected. Any suppuration of the lachrymal sac in newborn babies or small children is suspicious and must induce us to consider the possibility of hereditary syphilis.

By far the most frequent heredosyphilitic affection of the eye is parenchymatous or interstitial keratitis.

It is of course not necessary or intended to give here a description of its symptoms.

The older authors brought interstitial keratitis in connection with scrofulosis. Hutchinson, in the beginning of the last century, was the first one who maintained and established hereditary syphilis as a causal factor. In that he went too far; as he considered heredo-syphilis as the exclusive cause of parenchymatous keratitis. Later researches modified this view; but the opinions of different authors were at considerable variance. Graefe attributed 5 per cent., Davidson 20 per cent., Grosz 25-30 per cent., Panas 40 per cent., Fournier 41 per cent., Baslini 45 per cent., Michel 55 per cent., Saemish 62 per cent., Wecker 66 per cent., and Nettleship 68 per cent. to hereditary lues. A later statistic, comprising 1798 cases, communicated by 28 different authors, where a very careful inquiry into the presence of hereditary lues has been made, finds that 50 per cent. of the cases of interstitial keratitis are due to syphilis and we might accept this statement as giving our knowledge at the present time.

The clinical picture of interstitial keratitis due to hereditary lues does not differ in any respect from that of the cases due to other causes; it only affects both eyes more frequently than the others. The age of the patients lies between 2 and 20 years; the first decade of life being the one in which the affection is by far the most frequent. In the third decade, the disease is very rare, but occasionally met with; I have seen two typical cases where the causal relationship with hereditary syphilis could be established beyond doubt, at the age of 27 and 29 respectively. It seems that girls are more frequently affected than boys. The most frequent complications of this keratitis are from the uvea: iritis or irido-choroiditis. Furthermore it seems, that these complications are met with oftener in the syphilitic forms than in the others. Old changes in the choroid and retina are frequently present and would be found oftener if the fundus would be examined carefully in all cases of interstitial keratitis. I shall revert to these fundus affections.

After the resorption of the corneal infiltrate some of the newformed bloodvessels in the deeper layers of the corneal remain and are persistent throughout life. Even in cases where the cornea appears normal macroscopically, and where the vision has returned to the normal, some of these remnant bloodvessels may be discovered. They are visible with the ophthalmoscope, using a strong convex lens as a loupe. From them the diagnosis of a previous interstitial keratitis can be

made years and even decades, after the disease has run its course. It was Hirschberg of Berlin, who has first drawn attention to these facts. The presence of these persistent bloodvessels in the deeper layers of the cornea was later on confirmed by microscopical examinations by Baas.

The prognosis of interstitial keratitis is a fairly good one, especially if the causal factor is recognized and an appropriate antisyphilitic treatment instituted. In cases, where the diagnosis of heredo-syphilis is made soon after birth, the outbreak of interstitial keratitis, to which such cases are considerably inclined, can be prevented by proper treatment. Hochsinger found, that in 63 such children, which were energetically treated, the subsequent history of which he could follow for 20 years, interstitial keratitis did not ensue.

Whilst iritis and irido-cyclitis is by far more frequently due to acquired than to hereditary syphilis, the latter has sometimes these sequelae. The percentage, in which it is caused by the latter, ranges from 2-7 per cent. We find the different forms of iritis: serous, plastic, gumatous. The character of this affection is a chronic one with mild symptoms: little pain, slight injection of the eyeball; few and small synechiae; amenable to treatment.

Whilst congenital luetic affections of the retina and choroid have been reported occasionally as early as the beginning of the last century, it was especially Hirschberg and Sidler-Huguenin who called the attention of the profession to these lesions. The former found them once amongst one thousand patients. The affection is frequently overlooked on account of want of prominent symptoms. Small children sometimes draw the attention of their parents to their eyes, because they hold the head in an oblique position or squint. The minute changes can be discovered only after a careful examination; frequently in such cases the diagnosis congenital amblyopia has been made.

Huguenin distinguishes four different forms. In the first one there are minute yellow-reddish or red-brownish dots scattered over the fundus. They are mainly located around the equator, occupying sometimes only one sector. In mild cases the central vision is found to be normal. In severe ones there might be atrophy of the optic nerve as a complication. The lesions remain stationary during life and are not progressive. In the second form large choroidal patches form, which lead to atrophy of the choroid, irregular whitish spots with pigmented margins. They are also more frequently found around the periphery of the fundus. In the initial stage of the affection the vitreous is cloudy, but clears up later on. Silex considers this form of choroiditis in persons below 15 years of age as a indubitable symptom of hereditary lues. The third form resembles very much Retinitis pigmentosa; but the patches of blackish pigment are more round against the typical star form in the former, and they are located in the zone intermediate between the center and the periphery;

furthermore they do not follow the course of the bloodvessels as in typical pigment-degeneration of the retina. Atrophy of the optic nerve accompanies this form more frequently than the others. The functional disturbances are more pronounced. The vision, central as well as peripheral, is considerably impaired. The prognosis is poorer than in the other forms of fundus affections, but better than in retinitis pigmentosa. The last form is central retino-choroiditis. From the appearance it can not be distinguished from central retino-choroiditis due to other causes. But if found in children, it must always cause suspicion as to the possibility of hereditary lues. It is a frequent cause for the development of strabismus.

These retinal and choroidal affections are as a rule not very progressive; appropriate treatment is able to improve the vision to a certain extent.

Neuritis optica, leading to atrophy of the optic nerve, has also been diagnosed upon the basis of hereditary lues. Uhthoff found, that amongst 253 cases of optic neuritis after infectious diseases, 51 were due to aquired and 10 due to hereditary syphilis. Whether primary descending atrophy of the optic nerve can be caused by hereditary lues, is questionable.

Periostitis of the orbit, with the usual consequences, like exophthalmus, etc., may be caused by heredosyphilis as a few indubitable cases prove. More frequent are paralyses and pareses of the motor nerves and muscles of the eye. Huguenin observed in 125 children with heredo-syphilitic changes in the fundus: strabismus 13 times, abnormal pupillary reaction 15 times, and nystagmus 13 times. The paralyses were partly present at birth or took place within the first years of life.

To what an extent congenital syphilis is responsible for congenital malformations of the eye, like microphthalmus, coloboma of the iris or choroid, corectopia, ectopia lentis or congenital cataract, is still an open question. Huguenin found amongst his previous mentioned 125 children, 12 cases of malformation of the eye-ball.

Acquired Syphilis.—When syphilis ravaged Europe in form of an epidemic at the close of the 15th century, various eye-affections were brought in causal relationship to it, partly without due foundation. A closer knowledge of those really due to syphilis was gained in the beginning of the last century only; and of the intraocular diseases, after the invention of the ophthalmoscope, 1851.

The eye can be affected either primarily by the direct action of the syphilitic virus or indirectly in consequence of affections of organs in its neighborhood, bones, brain, etc. A classification of the eye affections in regard to the three stages of lues can be given at large only, as there are many exceptions. Initial lesions of the eye are of course met with only externally, on the lids, conjunctiva or lachrymal organs. In the second stage we find mainly the uvea, especially the iris affected. Between the secondary and tertiary: Choroiditis, retinitis, neuritis opti-

ca. In the tertiary: parenchymatous keratitis and the formation of gummata in the most different parts. No tissue of the eye, not even the lens, is immune against syphilis.

Statistics show, that in about 4 per cent. of luetic patients the eyes will be affected; and that nearly 2 per cent. of all eye diseases are caused by syphilis. As to the different tissues affected, a statistic of 3622 cases finds the lesion in the iris and ciliary body: in 45 per cent., the optic nerve: 22 per cent., the muscles: 15 per cent., the retina: 7 per cent., the cornea: 3.5 per cent., the lids and conjunctiva: 1 per cent., and in the different other organs 6.5 per cent. In more than 50 per cent. syphilis affects both eyes.

The age at which luetic eye diseases are found most frequently, is between 20 and 40 years; possibly the third decade of life presenting the majority. According to Badal the curve rises rapidly until the 25th year, remains about stationary until the 45th, and then sinks rapidly. The reasons for this are obvious. As to the sex, men are affected in 2-3 of the cases.

The eye is sometimes the seat of entrance of the syphilitic virus, the primary chancre being located there. This may be found on the lids, the conjunctiva and sometimes the lachrymal sac. Between 200 and 300 of such cases are reported in literature. The manner of infection is quite different: through utensils, fingers, instruments, kissing, etc. A number of cases of auto-infection, from the chancre on the penis during the very first days, are also on record. The primary lesion on the eye presents the same features as elsewhere; the affected lid swells considerably and very soon the lymphatic glands on the neck, first on the same side, become indurated. The residues, after the chancre has healed, are relatively small. The subsequent course of the general infection is the usual one.

In constitutional syphilis we may find on the lids the different forms of syphilids, which we find anywhere else on the skin. A more characteristic affection is syphilitic tarsitis. It is usually seen during the second stage. There is a chronic and painless enlargement of the lid, up to the size of a pigeon egg, which palpation proves to be due to an increase of the size of the tarsus. The skin is movable over it. Prognosis good after appropriate treatment.

The conjunctiva may show symptoms in all three stages of lues. In the secondary we find catarrhal conjunctivitis, ulcers and papules of the conjunctiva and then a type of conjunctivitis granulosa, which closely resembles trachoma; but the conjunctiva is anemic and pale and of a dirty appearance. All local remedies are without benefit, whilst it yields rapidly to constitutional treatment. In the tertiary stage gummata of the conjunctiva are met with, most frequently upon the ocular conjunctiva. But a number of cases reported as such are open to criticism. For differential diagnosis epitheliomata, tuberculosis, chalazions, papules and even phlyctaenaes must be excluded, and the diagnosis of tertiary lues must be estab-

lished from other symptoms.

Just as in hereditary lues, the lachrymal apparatus becomes affected secondarily only, in consequence of syphilitic disease of the mucous membranes and bones of the nasal cavities.

Parenchymatous keratitis, the most frequent affection of hereditary lues, is caused in 3 per cent. only by the aquired disease. It is then nearly always associated with inflammatory processes of the uvea. The clinical picture does not differ materially from that of heredo-syphilis. Contrary to the rule, the female sex preponderates in acquired keratitis. It is met with during the secondary as well as in the tertiary stage. A rare form is punctuated or dotted luetic keratitis. There are in the deeper layers of the cornea a number (4-50) small gray or whitish infiltrates, between which the corneal tissue is perfectly transparent. The impairment of vision is slight, the iris frequently implicated.

Syphilitic scleritis and episcleritis is rarely found alone; it is nearly always associated with or rather preceded by intraocular affections. But a gumma of the sclera might be seen as the only symptom of tertiary lues.

As stated in the statistics, the seat of predilection for syphilitic inflammations is the iris and ciliary body. Up to 6 per cent. of all luetics are likely to become affected by iritis. As to the frequency of syphilis as the causal factor of iritis, the opinions vary considerably; on an average we might state, that about 50 per cent. of all cases of iritis are due to lues. In about one-third of the cases both eyes are affected.

The type of syphilitic iritis is most frequently the plastic, rarer the serous and the gelatinous. Clinically there is no symptom, which is pathognomonic for a luetic origin. As a rule the inflammatory symptoms, especially the pain, are not as pronounced as in rheumatic iritis, but there are considerable differences in different cases. In about 1-3 there are complications in the fundus.

The affection of the iris takes place most frequently in the secondary stage, i. e. the first twelve months after the infection; sometimes in the very beginning of that. I have seen the condylomatous form as early as three months after the infection. The course of the disease does not differ materially from that of iritis due to other causes. The prognosis is not as good as in idiopathic iritis, but depends mainly upon the early causal diagnosis and consequent treatment. Posterior synechiae and their sequelae are frequently left. Gummatous iritis is of course met with in the tertiary stage. The seat of predilection is the ciliary portion of the iris and the ciliary body. The gumma may be isolated, or we find two or three in different parts. When they resorb after appropriate treatment an atrophy of the iris remains. If neglected, a or sclera. The prognosis of gummatous iritis is of course more serious than that of iritis in the secondary stage; Nearly 50 per cent. of the cases end in blindness. For differential diagnosis tubercles of the iris come mainly into

consideration. The nodules of the latter are smaller, more numerous, the color more yellow-whitish against the brown-reddish of a gumma, and the inflammatory symptoms are less severe. But a careful history is essential for differential diagnosis.

Syphilitic affections of the choroid can in many instances not be separated from those of the retina: Chorio-retinitis; whilst in a number we find exclusively the choroid or the retina affected. We can distinguish the following forms of luetic choroiditis: Acute irido-choroiditis; gummata in the choroid; diffuse chorio-retinitis and chorio-retinitis centralis. The diagnosis of any one of these forms can of course only be made with the ophthalmoscope. About one-half of these affections are seen in the secondary, the other half in the latter stages of lues. The main symptom being impairment of vision, the cases where the latter becomes at once manifest to the patient, as in central choroiditis or when the patches are near the center in other forms, will be seen earlier by the physician. We find frequently peripheral affections covering quite a large extent, and which must have existed for years, before the physician is consulted.

The types of syphilitic retinitis are: simple retinitis; disease of the larger bloodvessels accompanied by hemorrhages, and recurrent central retinitis. Whether retinitis pigmentosa may be caused by lues, is still an open question; the changes in the retina differ slightly, as mentioned already under congenital syphilis. The affection of the larger bloodvessels is one of their walls, arteritis and peri-arteritis. The arteries show a widened reflex, dirty discoloration of the blood column, and long whitish streaks along their walls. As a rule they are not obliterated; but the opacity of the walls may be so considerable, that the blood column becomes invisible. Sometimes the veins present similar appearances. Hemorrhages into the retina and vitreous take place frequently during its course. The prognosis of choroiditis and retinitis is fairly good, but only if a timely diagnosis, followed by antiluetic treatment is made. The latter must extend over a long period.

The optic nerve affections can be primary or direct ones; more frequently they are secondary. Of primary ones we find optic neuritis as well as retro-bulbar neuritis, with the symptoms typical to each of these diseases. They occur in one eye alone with about the same frequency as in both eyes together. Two-thirds of the cases occur within the first year after the infection. Whether simple (plain white) atrophy of the optic nerve can be caused by syphilis, is very doubtful. The cases reported as such give occasion to serious objections; cases of optic nerve atrophy due to tabes or progressive paralysis of course excluded.

Secondarily the nerve may be affected in consequence of luetic disease of the orbit, the optic foramen, basal meninigitis or gummata, and finally diseases of the brain.

Glaucoma can be indirectly caused by syphilis, after iritis or irido-sys-

tilis, which lead to synechiae, closure of the pupil, etc.

In the orbit we find periostitis; its seat of predilection are the orbital margins, most frequently the upper one. It is usually accompanied by severe pain. When the seat is deeper in the orbit, exophthalmus will follow. In all cases of this kind a careful examination and differential diagnosis is necessary, as a number of cases are on record, where skilled diagnosticians made a mistake and subjected the patient to an unnecessary operation.

Paralyses of the external or internal eye muscles are of luetic origin in about 50 per cent., according to Alexander even 59 per cent. Their relative frequency in syphilitic patients has been given above. As regards the seat we distinguish intra and extra-cranial ones; the former into: cortical, fascicular, nuclear and basal ones. According to Mauthner the nuclear palsies are the most frequent. When the intrinsic muscles, sphincter of the iris and ciliary muscle are alone affected, the paralysis is nearly always a nuclear one. Paralyses of the intrinsic muscles make up 25 per cent. Of the extrinsic muscles the motor oculi heads the list. Amongst 584 cases, branches of this nerve were paralyzed in 73 per cent., the abducens in 24 per cent., and the trochlearis in 3 per cent. only. The paralyses of the eye muscles occur in the main in the later stages of syphilis, some years after the infection, even as late as 15 to 34 years. The prognosis is doubtful; relapses are frequent and Mauthner gives a gloomy prognosis especially in the cases of central and nuclear origin, which are frequently the forerunners of serious affections of the central nervous system.

If we compare the syphilitic ocular lesions, which are caused by acquired lues with those due to the inherited, we find a fundamental difference in the tissues of predilection. In the former it is the iris and ciliary body, in the latter the cornea. On the one side the tissues, which are the richest in regard to blood supply, on the other the tissue with the poorest, being normally devoid of bloodvessels. In the former we have quite acute inflammatory processes, the latter are characterized by the want of such and by an especially chronic and tedious course. This difference is certainly due to a certain change, which the syphilitic virus has undergone by the transference from one generation to another. As it seems now the long sought for specific cause of syphilis has really been discovered by Schaudinn and Hoffmann in the "Spirochaeta pallida" and the presence of it, in acquired as well as inherited lues, has since been confirmed by quite a number of independent investigators. If this discovery should prove to be true, further investigations and an increased knowledge of the biology of this microorganism, will in all probability throw more light upon this interesting diversity between the lesions of the acquired and the inherited form.

DISCUSSION.

Dr. F. L. Henderson:—This contribution of Dr. Barck's is very valuable, particularly as regards its

statistics. However the statement that syphilis is found in 2 per cent. of all eye diseases struck me as below the mark. Most oculists will agree with me that more than 2 per cent. of their cases are due to syphilis. The oculist should be a syphilographer for this reason. Wilmot, of Stockholm, gives the percentage of cases of blindness from syphilis as 17 per cent. When in doubt as to the treatment of inflammatory eye conditions, I generally institute syphilitic treatment. I have had recently several cases that tend to justify that course. Last week I had a physician come to me with an iritis. He scouted the idea of their being any syphilis in the family. I pushed the treatment with anti-rheumatics but the pain increased; I changed to inunctions of mercury and gave internally the protoiodide and in twenty-four hours the pain was relieved. The presumption here is certainly in favor of a syphilitic origin. I also had a little child recently, whose mother was a large, well developed, handsome woman, and the father scorned the idea of syphilis, though the child had an interstitial keratitis. I put it on antisyphilitic treatment, however, with excellent results and in about a month I found that there was also a hyperkeratosis of the tibia. I recall another case, that of a lady in whom the lower eyelid puffed out to an extraordinary degree when she looked up. It was a marked case of tarsitis. There was no history of syphilis but it disappeared entirely under iodide of potassium. The husband afterward manifested symptoms of locomotor ataxia. In retinitis pigmentosa I would suggest as a means of differential diagnosis, that in those cases due to syphilis it is generally monocular while it is binocular in the nonspecific cases. Also central vision in true retinitis pigmentosa is good to the last, whereas in pigmentation of the retina due to syphilis central vision is usually defective.

Dr. Joseph Grindon:—What proportion of the cases are nonsyphilitic in origin?

Dr. Henderson:—Statistics state 50 per cent. but I think that is too low. I could not state just what the percentage of cases would be; not nine-tenths, perhaps, but I am in the habit when at all in doubt, of starting them on syphilitic treatment.

Dr. John Green, Jr.: I was particularly interested in Dr. Barck's statement as to the late occurrence of interstitial keratitis. I have recently had under observation a young woman of 31 who presented a unilateral keratitis. I did not at first suspect hereditary syphilis. On examining the teeth I found three instead of two upper central incisors, but the middle one was a gold tooth. I called in a dental friend who promptly plucked out this gold tooth, which had been inserted for cosmetic purposes because of the extraordinary separation of the natural incisors. The teeth presented the typical Hutchinson appearance. Keratitis finally developed in the other eye and was controlled only by general antisyphilitic treatment. Dr. Barck spoke of syphilitic periostitis of the orbit simulating orbital tumor. I observed a case of

this character at the Female Hospital. There was a nodular tumor at the upper inner angle of the orbit seemingly attached to the bone and producing considerable exophthalmus. On examination with the ophthalmoscope there appeared marked evidence of obstruction to the return of venous blood from the retinal vessels. I desired to make an exploratory incision and get a piece of the growth for histologic examination, but the patient declined to submit to any operative interference. The patient was given potassium iodide, finally receiving the enormous dose of 208 grains three times a day. The tumor shrunk little by little and when she was dismissed at the end of six months there was complete restoration of facial symmetry.

I believe Dr. Barck failed to mention "gumma of the cornea." This is extremely rare—but undoubted cases have recently been reported by Vinsonneau and Terson.

Dr. J. F. Shoemaker:—The ocular manifestations of syphilis may be called legion. I understood the essayest to say that the majority of ocular paralyses were due to nuclear lesions. Exception may be taken to this statement, as syphilis at the base of the brain is a rather frequent occurrence, and during recent years even those cases in which the lesion had been positively located in the nucleus have been shown, in several instances, to be due to basilar trouble.

Dr. Chas. J. Kipp, about three years ago, reported a case where all of the extrinsic muscles of one eye were paralyzed but not the intrinsic. This is not altogether uncommon, but heretofore it has been assigned to a nuclear lesion. Even so good an authority as Henry D. Noyes says these troubles are always nuclear. Dr. Kipp's case is interesting because some of the symptoms pointed to a lesion other than in the nucleus. There was severe pain over the right eye which lasted more than two months and the patient became entirely blind in this eye. She was treated with potassium iodide and during the treatment there developed ptosis, and later complete external ophthalmoplegia, but the intrinsic muscles were not affected. Under the treatment the paralysis cleared up entirely but the loss of vision was permanent, there being complete atrophy of the optic nerve. Kipp made a diagnosis of gumma or gummatous meningitis just back of the orbit. The patient died and at autopsy there was found an organized blood clot encircling the third nerve near the dura. Microscopic examination of sections of the nerve showed the fibres all destroyed excepting a few in the center. This would seem to show that the fibres supplying the intrinsic muscles of the eye are in the center of the third nerve and that the greater part of the nerve can be destroyed by pressure and still these fibres escape. These cases suggest that we probably locate a good many lesions in the nucleus that do not belong there.

Dr. Julius H. Gross:—It is always very difficult to trace the fact of syphilis in the parents and the practice of most oculists is to treat such cases as being due to hereditary syphilis. I would like to ask Dr.

Barck whether judging from his personal experience, he does not think that the percentage of interstitial keratitis due to congenital syphilis is not larger than 50 per cent. From my experience I should say that the percentage is much larger than that. The percentage of nonspecific primary iritis, in my experience, is very small. Not more than five cases out of every hundred are nonsyphilitic.

Dr. J. C. Murphy: In days gone by I treated all sorts of cases, including eyes, and one day about ten years ago a Chinaman came to my office with a typical iritis, affecting both eyes, his vision was practically nil. I was told when a student that whenever I had an eye case and did not know what to do for it to give antisyphilitic treatment, and in that case I followed the advice. I gave him protiodide of mercury, ⅛ to ¼ of a grain three times a day, and the vision was restored. Following my success with that Mongolian I had nineteen others, they all had iritis, many were practically blind, they all received specific treatment and they all improved. So I could say that ten-tenths of the cases in my experience were specific.

Dr. J. C. Buckwalter:—At the present time I am treating a case in which I have made a diagnosis of gumma of the iris. The nodule in the upper half of the iris is of a brownish red color and about half as large as a pea. The patient has had syphilis for six months and the nodule is a typical picture of gumma of the iris as described by competent observers.

Dr. Barck, in closing: Statistics can only be taken with a certain degree of reserve. I have given a large number of statistics and have frequently stated to what an enormous extent the statistics differ, and I have usually given the lowest percentage. For instance one writer states that 16 per cent. of all blindness is due to syphilis. Blindness is relatively more frequently caused by syphilis than eye diseases in general, because syphilitic affections are severe affections. As to the general statistics, the frequency of eye diseases due to lues is given from 1 to 6 per cent. This depends upon the material. The highest percentage is given by authors who draw their material from places where there are many luetics. For example, Alexander, who takes his statistics from Aachen, the "Hot Springs" of Germany, finds of course a larger percentage of cases as due to syphilis, than others. As to iritis, the statistics from Paris gives 75 per cent. of the cases as due to lues, Paris being a city where lues is frequent. It seems to me that in our city not much more than 50 per cent. of the cases may be said to be due to syphilis. As to retinitis pigmentosa, I have mentioned the difference in the appearance of the fundus. I think the two conditions can always be separated. Retinitis pigmentosa always affects both eyes and in those cases where but one eye is affected, it is safe to exclude it. Cases of retinitis pigmentosa, where the central vision is normal, are exceedingly rare. The statement that in isolated paralysis of the intrinsic muscles nearly always a diagnosis of nuclear paralysis can be made, is

confirmed by a number of autopsies. While we do not know exactly where the ortical center of these muscles is located, we know the paths from the nuclei towards the cortex. There the nerve fibres are running together in a bundle; and so of course peripherally from the nuclei in the optic nerve. Whilst the possibility can not be denied, it is at least improbable, that any disease should select in the motor oculi nerve just the fibres going to the intrinsic muscles and leave the extrinsic ones perfectly intact, or *vice versa*. This same reasoning applies to the nerve fibres centrally to the nuclei. In the nuclei themselves the centers for the different muscles are distinctly separated, lying one behind the other in the following order from upward down: Ciliary muscle, sphincter of iris, extrinsic muscles. A limited affection, as for instance a small hemorrhage or softening, may destroy one of these nuclei, leaving the neighboring ones intact, and a number of such findings, post mortem, are on record. We are mainly indebted to Mauthner for the scientific sifting of these cases.

Put this first of discussion

Dr. Henderson:—In regard to retinitis pigmentosa, the points I mentioned were merely mentioned as points of differential diagnosis. If I said central vision was retained to the last I did not properly express my meaning, I intended to say that central vision was the last retained. We all know that the ultimate result is blindness. I will repeat that syphilitic condition resembling retinitis pigmentosa, is often monocular while true retinitis pigmentosa is always binocular.

ARE WE NOT CONSERVATIVE IN REMOVING BONY STRUCTURE IN THE FOOT TO FAVOR DRAINAGE IN SEPTIC INFECTION.*

BY J. F. MENESTRINA, M. D., ST. LOUIS.

All who are familiar with the complex anatomy of the foot and the difficulties arising in the attempt to properly drain this area in phlegmonous conditions involving bone, can bear me out, that the ordinary method of free incisions and drainage is not sufficient for the purpose but it is often necessary before obtaining mastery of the infection to remove one or two metatarsal bones and, in formidable cases, some of the tarsal.

It is incredible how apparently insignificant abrasions of the skin can be responsible for such fearful involvement of fascias tendons, articulations, synovial cavities periosteum and bone. The infection travels from the cutis usually on the dorsum through the hair follicles leading to a formation of typical furuncles,and on account of the loose arrangement of the longitudinal and loose subcutaneous connective tissue its phlegmonous affections present characteristics similar to other subcutaneous phlegmon. On the plantar aspect, however, its invasion depends on the anatomical peculiarity of that locality. On the toes we find short thick fibers in a dense network. These enclose a number of acini of fat going from the skin direct tothe periosteum or to thesheath of the tendons to which they are closely attached. The lymphatics run about the same centripetal course of the connective tissue. This explains why such extensive tendon and bone necrosis takes place so rapidly. The rigidity of these dense structures, the great tension due to the subcutaneous connective tissue arrangement, favors the downward progress of the infection. The sheaths of the flexors of the big and little toe communicate openly with the common plantar bursa through which all the flexor tendons of the toes pass. Hence, pockets of pus accumulate in this bursa and this peculiar anatomical arrangement is to us of great practical importance in directing our early plantar incision. In the sheath of the 2d, 3d, and 4th toe flexors, we have a different arrangement. Instead of communicating with the plantar bursa they have separate and closed receptacles which terminate with the metatarso-phalangeal joint. The tendons possess no sheath proper for a short distance beyond these sacs, but are immediately enclosed by loose connective tissue. Infections originating in these toes often open spontaneously, where the blind end of the closed tendinous tissue coincides with the thinnest portion of

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the plantar aponeurosis. This should be borne in mind when early incisions are made in infections originating in these toes.

If case is seen early enough, proper openings in this region and drainage will suffice, but if delay or hesitancy is displayed or the old time practice of poulticing is employed, bone necrosis is inevitable. It is this particular kind of infection I wish to make the theme of this paper as it represents a frequent occurrence, where a number of limbs are lost through the indecision or want of energetic action on the part of the surgeon. In a few of my cases where practically every bone in the tarsus and metatarsus were involved I deemed it necessary to completely disarticulate the 2d or 4th metatarsal bone to provide good, roomy space for the drainage of the anterior portion of the foot. A counter opening on the plantar surface from heel to toes gives access to plantar bursa, where pus is usually found. It is also receptacle for the drainage tubes. From this incision practically you have control of the tarsal bones and any necrotic mass can be curetted and drained. Counter opening at both malleoli and a drainage tube to plantar incision is also possible and peremptory. Lower end of tibia and fibula in these virulent infections are not always free from necrosis, and frequently I find it necessary to reach them by incision parallel to the tendo Achillis.

I herewith report a case of unusual interest with the general involvement of practically every tendon, articulation, synovial cavity and bone in the foot and where it resulted in recovery with a fairly sound foot.

A. R., age 28 years; Italian; bartender by occupation, was admitted to Protestant Hospital June 9th, 1905. Previous history: 8 years ago had a severe attack of typhoid fever with several relapses. He recovered. Five years ago he sustained a lacero contused wound of the dorsum of the foot from a fall from a horse. It apparently healed but since has repeatedly opened and closed. In March last a fresh injury to the same locality was allowed through negligence to become infected. He always led a dissipated life and his impaired condition of health and consequent lack of resisting power to microbic invasion made possible a virulent type of infection. No history of syphilis. Previous to his admission to the hospital he had been treated for two weeks by another surgeon, who subsequently directed the case to me. He had freely opened dorsum of the foot and attempted drainage. When first seen his foot was swollen, edematous, angry-looking. His subjective symptoms were very distressing; high fever and intense pain being present. On microscopical examination streptococci were found He was partly delirious, showing a profound form of infection. He was ushered to the operating room at once and anaesthetized. Incisions were enlarged and I observed then that practically every tendon, articulation, bursa synovia and bone were a part of the general suppuration. A free incision was made in the plantar aspect of the foot from

heel to toes, taking great care not to divide plantar arches and nerves. From above I pushed aside extensor tendons and removed 2d and 4th metatarsal bone and forced through each gap two stout drainage tubes to plantar incision. In the procedure I enocuntered a pocket of pus beneath deep plantar fascia. The under surface of the oscalcis was found necrotic and was curetted almost to a shell. Other tarsal bones received the same treatment, though more superficially involved. Tibia and fibula were reached by an external incision parallel to tendo Achillis. This was drawn aside and lower end of these bones also curetted. Two more incisions were made beneath malleolus and a drainage tube was passed through to plantar opening, making a total of *six* large drains coming through this incision. Soft tissue were sub-drained with iodoform gauze, moist dressings were liberally applied, foot was elevated, and he was placed in bed. Hypodermoclysis of normal salt solution were given him every four hours in axilla in conjunction with strychnine and sustaining treatment. Pain was mitigated by hyporder-mics of codein phosphate. Other pockets formed from day to day but were promptly opened. In a week's time case assumed a different aspect Delirium ceased; pulse and temperature were very much improved, swelling subsided and infection was conquered. Four weeks later most drainage removed. Healing was complete in two months' time.

I consider this case very remarkable and instructive. It was only the most energetic and wholesale hacking and removal of bone that made possible perfect drainage and subsequent repair. This may at first not appear as conservative work. But, as the result herein shown, we may claim it and justly so. One may ask in what shape is a limb left treated or mistreated in this fashion, after infection subsides and healing takes place? To be sure, you must not expect a perfect elastic foot. Ankylosis takes place in every joint affected by suppuration. This is inevitable. Intervening space made by the removal of the 2d and 4th metatarsal bone fills up with fibrous tissue that gives firmness to the foot. Circulation is for a time impaired. Hypersensitive areas are frequent in the line of cicatrices. Local anaesthesia is also unavoidable, due to division of cutaneous branches of nerves: but all these conditions are gradually improved and patient is left with a limb fairly useful, and lives. When we consider that many limbs and lives are sacrificed yearly by delay or lack of aggressive methods, I feel we are justified in calling this conservatism.

I observed that after injuries to bones and in the lower extremities particularly, atmospheric changes in spring and fall are perceived by these patients sometimes days ahead. I am unable to account for this human barometer unless it possibly be explained on the hypothesis of the changes in atmospheric pressure. The normal pressure of the atmosphere is sufficient to support a column of mercury about 30 inches in height, which is equivalent to a pressure of about fifteen pounds to the square inch. Now, at the ap-

proach of a storm, the mercurial column may be shortened to the extent of ten or twelve per cent., which would indicate a change of pressure of about one and one-half pounds per square inch, less than normal, and it is just at this time that the pain is most pronounced, that is at the approach of a storm but before it has begun. Scar tissue being very unyielding in texture and usually entirely unsupplied with pores, adapts itself to change of pressure very slowly and imperfectly especially so as the muscles of the part have been displaced by the cicatrix. When a change of pressure in the atmosphere equivalent to one and one-half pounds occurs, the whole body through the medium of the pores in the skin adapts itself to the change; not so with the scar tissue however; it adapts itself very slowly to the change and we have a pressure from within of fifteen pounds and from without of thirteen and one-half pounds, which causes a swelling of the part, a hyperemia, attended with pain, and in such a case as this one, where there is a scar surface of about sixteen square inches, it would be equivalent to a twenty-two pound weight lying on the foot.

The pain is described as of a boring, lancinating or gnawing character. In dry, cold or warm weather these people rarely if ever complain. I observed, also, that the normal convexity of the cavum of the foot is partly lost, after recovery, and I direct these patients to have a steel plate made, such as are in use for flat foot, and the arch gradually increased from week to week.

In conclusion, I would urge prompt action in this class of cases if same are seen early enough before deep destruction takes place. It is well to remember to treat the most trivial skin lesions,strictly antiseptically as from this source the deeper lesions surely develop through the route above described. In lesion of the big and little toe, open plantar bursa at once. When the other three are involved, open at metatarsophalangeal articulations where plantar aponeurosis is thinnest. In involvement of tarsal bones, don't hesitate in providing free access by adequate incision in plantar surface. You will be surprised how many limbs can be saved by thoroughly curetting os calcis, the most frequently involved of all bone in the tarsus in these desperate cases. Do not omit lateral counter incision and superficial drain, and, above all, provide good opening by the removal of the second and the fourth metatarsal bones.

DISCUSSION.

Dr. John C. Morfit said just so much of an organ should be sacrificed as is necessary. Drainage was absolutely necessary, and the surgeon was not conservative in removing a bit more than was necessary for that purpose. The foot, surgically considered, was one bone. In amputations and in septic conditions it was treated as one part, as much being saved as possible, while sacrificing as little as was necessary.

Dr. Robert M. Funkhouser said one question that confronted the

surgeon in all these deforming operations upon the foot was how much could be taken away and yet insure a useful member. The main object was to get rid of the sepsis, but in the progress of the trouble it might be found that by taking away a part of the bone, though the parts would heal, a subsequent operation would be necessary to give good function. After removing a part of the os calcis, the scaphoid or the cuneiform bone, it might be necessary to do a secondary operation.

Dr. Norvelle Wallace Sharpe said that anyone who had been obliged to establish draining in cases of this character would agree that at times it became necessary to remove any structures that might stand in the way of its successful accomplishment. In regard to the unmodified statement that, "a joint that was not drained became ankylosed", he suggested that the character of the infection and the degree of involvement of the joint structures must be taken into consideration; for an infected joint, not drained, does not invariably become ankylosed.

Dr. Menestrina, in closing, said that he wished only to make a plea for conservative work. He asked if any one present had any experience in tubercular work, where the removal of bones had been necessary, and what results followed such operative procedure. In reply to Dr. Sharpe's statement that a joint might not become ankylosed following suppuration he contended that where such destruction of articular surfaces were present as in this case, ankylosis would always follow.

THE DUTIES OF THE PRACTICING PHYSICIAN TO THE GENERAL PUBLIC, IN INFECTIOUS DISEASES.*

BY A. S. BLEYER, M. D., ST. LOUIS.

When this subject, "The Duties of the Practicing Physician to the General Public, in Infectious Diseases" was presented to me, I was unable to determine clearly just what was expected. As it appears to me, the subject is almost illimitable, there is so much, so many things that constitute duties for the physician to the public in the infectious diseases. It was necessary therefore to find some arrangement which would permit, in the space of a few minutes to convey my conception of those requirements which are of rather higher importance.

It occurred to me that the least confusing—the most clear arrangement, would be to make of the subject, two grand divisions, namely; the duties of the physician in infectious diseases before or without the appearance of a previous case, and, secondly, the duties of the physician after the appearance of the infection.

The first part of the subject therefore would properly deal with sanitation; the control of our dairies, of our water and ice supply, the preservation and handling of foodstuffs, the ventilation and cleansing of public places and conveyances; it would concern itself with immigration, with travel, with all matters pertaining to social intercourse, and with the occupational diseases.

Plainly, it would be impossible to enter with any degree of thoroughness into all of these subjects, and furthermore, it would perhaps not be in my province to do so, at this meeting. I will take the liberty however, of commenting briefly on them and will confine my remarks to the necessity of a more mediate and effective control of our dairies, and to the necessity of the adoption of certain standards for the ventilation of public places and conveyances.

The second division of my subject will demand a word concerning the infectious diseases, the manner of their propagation, of their control. To this subject, I will return later.

Just how much the control of dairies lies in the hands of practicing physicians is a question rather of personal than professional anxiety, since the state should institute proper watchfulness over them, and afford sufficient protection.

It is of interest however, if not so much to the general practitioner as to the pediatrist, to be as well informed as he may about the source and character of the milk that he is prescribing for his patients, and above all, in this connection, its pur-

*Read before the St. Louis Medical Society, February 10, 1906.

ity, its freedom from the group of bacteria constituting the subject matter of this evening's discussion.

That outbreaks of scarlet fever, diphtheria, typhoid and dysentery have been traced to dairy milk does not need here be authoritatively quoted, they have been almost frequent. (Eyre, *Brit. Med. Jour.*, Sept. 2nd, '99.)

Infections by bacilli of the coli group, and by tubercle bacilli, have yet not received their full appreciation.

Tubercle bacilli have been found in the milk of cows without tuberculous disease of the udders, and without any symptoms of tuberculosis except a positive reaction to the tuberculin test. (Rabinowitsch and Kempner, *Lancet*, Sept. 28th, '01.) (Ostertsg, Adami and Martin.) Such milk is infectious, and may, under certain conditions be the source of a tubercular process in the infant taking it. About the correctness of this, there is no longer any doubt.

It is a common observation among dairymen, that the finding of a tubercular cow in a herd, suggests the early appearance of later cases. I should imagine roughly that in this country, from 15 per cent. to 20 per cent. of all cows are tubercular. Nathan Raw of Liverpool, states that from 19 per cent. to 40 per cent. of all cattle in different parts of England are tubercular. It is also claimed by scientific dairymen, that there has been a decided increase in the number of such cases during the past fifty years.

It is surprising, however, to note the degree of carelessness now exercised in this connection. Last week, during a conversation with an accredited veterinarian in Illinois, I had occasion to learn that attention is no longer paid to tuberculosis in cattle in his vicinity; tests are no longer made, and the matter is considered without importance; such cows are not removed from the herd.

Staphylococci,streptococci (Ward) and many saprophytic bacteria have been found in milk coming from cows suffering with a mastitis, and indeed, were present long after the mastitis had disappeared (Ward, Lameris and van Harrevelt).

Besides these, and other highly infectious organisms that may come from a diseased animal, there is likewise an endless group of pathogenic and non-pathogenic bacteria that are always found on the premises of unclean dairies. These bacteria produce deleterious changes in the milk, and are also frequently the cause of grave gastro-intestinal infections in the infant. So-called non-pathogenic bacteria when present in great numbers in milk, become virulently pathogenic, either through their action on the milk, or by intestinal inoculation.

Later contamination of milk during shipment, either by new infectious organisms, or by multiplication of bacteria already present in it, depend upon the way in which it is handled and transported. There are good laws governing these matters in this state, and their enforcement is being executed today in a far better manner than was formerly done.

We have not however by any

means reached the position that should be held, if we are ever to eliminate even in degree, this great menace to the public.

It will be the duty therefore of the physician, to take a part in the reorganization of our diaries. Our local dairies are for the most part in a really deplorable condition, colon bacilli are repeatedly found in the best milk that we receive, and the bacterial counts frequently reach millions per cubic centimeter.

There could be no wiser means of controlling the management of our dairies than to establish a fixed bacterial standard for all milk brought into St. Louis.

It would furthermore be a highly just and far-reaching policy, to demand that all dairymen be placed under bond, for the purity of their milk.

With or without such a policy, it is certainly the duty of the physician called into attendance upon a case of infectious disease to inquire into the source of the milk-supply, and to make a report to the health officers concerning it. If this were systematically done, many outbreaks of such diseases as scarlet fever, diphtheria, typhoid, the dysenteries and gastro-intestinal infections might be accounted for, and a very great menace to the public removed.

I would furthermore recommend that the health department have a space reserved on the blank-forms intended for the reporting of infectious cases, in which the physician would be expected to fill in the name of the dairy from which the milk supply was obtained. There would be no accusation involved herein, any more than there is in our present system of reporting the name of the school last attended.

If you will allow me, I would like to say a word concerning the subjects of ventilation and cleansing of public places and conveyances. Much has been done in this direction during the past few years, due in great measure to the aggressive action of many members of our profession, in the matter of the control of tuberculosis. Much however remains to be done.

The cleansing of public places, now that our ordinances have taken the salutary step of abolishing promiscuous expectoration, resolves itself largely into a question of ventilation. The control of infectious diseases with this help, has become vastly simplified, for it is undoubtedly true that over-crowding, stagnant atmosphere, and heat are the most effective means of furthering communication of any infectious disease from one person to another. It is quite unnecessary to insist at length upon so well recognized a factor. We have always had examples thrust upon us of such cases.

I would like to have found some scientific data on which to support this ancient fact, but very little new work has been done on the subject, perhaps because of the fact that many of the infectious diseases have not yet revealed their specific organisms.

In dealing with the question of ventilation, it is first necessary to agree at least arbitrarily, on what constitutes a vitiated atmosphere. A standard must be taken, and a ra-

tional basis conceived on which to formulate it.

Because of our lack of knowledge as to what actually constitutes the organic respiratory products, and because of our ignorance of the nature of many infectious elements, all authorities agree that a determination of the percentage of carbonic acid would give us a fairly accurate index as to the condition and the amount of impurities of all sorts that such air contains.

Pettenkofer, who has done perhaps more work in this field than others, suggests a maximum limit of 10 volumes per 10,000 volumes of air, for all public places. De Chaumont thinks that 2 volumes in excess would be a safer limitation. Anderson and Haldane propose a limit of 13 volumes for school-rooms and 10 volumes for sleeping-rooms.

A committee organized in London, to determine what should justly constitute a legal maximum of vitiation, decided that for factories and work-shops, 12 volumes in excess by day, and 20 volumes by night would greatly and sufficiently improve the conditions now existing. The health office however took exception to this decision, claiming that such recommendations were too lax, and that a standard of limitation of 9 volumes of CO_2 per 10,000 of air in all places should be established, i. e., an excess of 5 volumes to the ordinary outside air.

This, it seems to me, is altogether just, and could quite easily be obtained, at the expense of a little more fuel for heating in winter, and the adoption of some system of ventilation which, if regularly and carefully executed, need not be expensive. Barwise has shown that bad ventilation is exceedingly wasteful, and that improved ventilation more than repays itself by increased grants to schools and increased output from work-shops.

Lyon, of London, places the cost of mechanical ventilation in factories, at twenty cents per thousand individuals per hour. This, of course, may not have any application in this country. Mechanical ventilation has superseded natural ventilation wherever it has been tried. It is plain, that wherever possible, heating during the winter months has been done at the expense of ventilation.

The conditions actually present in our street cars, may be estimated from a recent inquiry made into this question by the health department of New York (Soper, *Med. News*, Apr. 19th, '02), where it was found that carbonic acid gas was present in percentages ranging from 26 to 31.2 per 10,000.

Haldane (*Brit. Med. J'l.*, Aug. 13th, '04), found in the schools throughout Scotland, a percentage of from 17.5 to 35 volumes of CO_2. In factories, this mounted frequently as high as 40 and 45.

That street cars are ridden with pathogenic bacteria, was pointed out by Hance (*N. Y. Med. Rec.*, Feb. 13th, '97.) Dyar (*Am. Annals N. Y. Acad. Sciences*, May '95), and Frith. (*Studies from the Dep't. Path., Col. P. and S. of N. Y.*, Vol. 7.) It will not be necessary to further elaborate these matters.

I will hurry on to the second divi-

sion of my paper; namely, the duties of the physician after the appearance of the infectious disease.

The problem here, that will demand attention is, of course, above all, *isolation;* and I would like to spend a few moments in discussing its most important laws, and then point out their applications in some of the more prevalent and dangerous of the infectious diseases.

By isolation, I do not mean isolation of the patient only, I mean isolation of the patient and of everything that comes into proximity to the patient, of everything that comes *from* the patient. Isolation not of the individual but of the disease, isolation of the contagium of the disease.

To isolate a disease, we must first be able to isolate the source of the contagium of the disease—the patient.

The second rule will be to so govern those in attendance upon such patient that they may in a sense preserve each an individual quarantine, the laws governing which will have to be yet more strictly enforced upon those who must retain their own freedom of person.

The third phase of the subject concerns the watchfulness over the patient after the end of his disease, when he may still remain a source of danger to the public, because he continues to carry about with him, infectious materials.

Firstly, then, our rule will be isolation of the patient, this must be done at the earliest possible moment when the disease has been perhaps only suspected. We are not prepared to say whether the infectious diseases are communicable or not during the stage of their incubation, they had best therefore be isolated at this time. This might be termed the "Observation Stage of Isolation."

Secondly, as to such of the patient's surrounding objects as may have to be removed from the isolation chamber, and as to his attendants, we have to deal first with the physician. I would urge that the use of gowns and caps be never neglected, and unless gowns and caps be immediately sterilized after each time used, I would recommend that two gowns and two caps be made use of, simultaneously, since the gown worn exteriorly would not afford much protection to the physician's clothing after the first time it had been worn. Secondly, gloves should be worn when applications to the throat or any treatments are necessary. Thirdly, the physician should not wear a beard. Lastly, comes the matter of the physician's shoes; Wright and Emerson found diphtheria bacilli on the shoes of three nurses, in the Boston City Hospital. Denny and Nyhen (*Bost. M. and S. J'l.*, Dec. 29th, '04) inoculated the soles of their shoes with cultures of bacillus prodigiosus, and obtained the following results: Of 15 inoculations made on the side of the sole, 11 were positive after 72 hours. Of 26 inoculations on the instep, 58 per cent. was positive in from one hour to nine days. Of 22 inoculations on the under surface of the heels, 12 were positive after from one to three hours.

These tests show us that we may carry infectious material in a dry

state on our shoes for even long distances,and the matter assumes added importance should the physician visit children and perhaps enter their own room, where the floor is their play-ground.

It is necessary then, that the physician either disinfect the soles of his shoes, or wear over-shoes while in attendance on infectious cases.

This leads me to a last word on this subject, the physician's thermometer. I have seen very good men in attendance upon cases of measles and whooping cough, after taking a mouth temperature, replace the instrument in its case without any disinfection. The most that is usually done in the average suspected case, is to have the thermometer wiped off with a moistened towel. I consider this a serious dereliction of duty.

Bardy, a French pharmacist, has constructed a sterilizable clinical thermometer, which is, unfortunately quite cumbersome. It has excellent features however, and for hospital purposes at least, will find a position of value.

After the physician, comes the care of the nurse and the other attendants. I will dismiss this subject with this statement, that no nurse or other person should leave the isolation chamber without performing as thorough a disinfection of her hands as that required in the surgical operating room. She should bathe, change her clothing and her shoes and should certainly disinfect her hair. A mild alkaline spray of the naso-pharynx is advisable to facilitate the elimination of any inhaled bacteria.

As to disinfection in isolation, it must be aggressive. The time to disinfect is whenever anything that has been contaminated is available for disinfection. Disinfection must be hourly, and all-seeing. To wait until the patient has recovered before doing this, is unscientific.

As to the *third* part of the subject of isolation, the question involved is largely one of time, sufficient time for the complete disappearance of the infectious materials from the patient's body. This, in scarlet fever, may run into the second, third or fourth month, and depends rather upon the conditions of the mucous membranes than upon the condition of the skin, usually by the end of the second month the desquamation is complete, while a supperative otitis, or an involvement of the respiratory system may last a great deal longer, and be highly infectious.

In diphtheria, no case should be discharged without at least two bacteriological examinations of the throat or implantation area, the second at the interval of one week after a negative report.

In typhoid fever, it must be remembered that typhoid bacilli are present in the urine in about 21 per cent. of all cases, and that when present, are usually in vast numbers, and may remain in the urine many months or even years. No case of typhoid should be discharged as recovered without a bacteriological urinary examination.

In this disease, the role of flies in its transmission must not be overlooked. Sangree pointed this out quite graphically, after the bitter experiences at Chickamauga had

awakened our attention to it. (Sangree, *Med. Rec.*, Jan. 21st, '99).

In influenza, the Pfeiffer bacillus may remain latent for several months after the apparent recovery of the patient, the infectious character of the disease is especially brought out wherever insufficient ventilation obtains; this fact is frequently demonstrated in all children's hospitals, where the occurrence of a case of grip in a ward is usually followed by the development of the disease in most all the children of that ward. In whooping-cough, we observe the same conditions, and although with perhaps less virulence, with even less disposition to disappear completely until a very long time has elapsed.

In pneumonia, bronchitis, laryngitis and coryza, infection from another patient is exceedingly common, especially in the later stages of these diseases.

Of bronchitis, Ritchie has this to say: Bronchitis is an infectious disease; the most important causal bacteria are the diplococcus pneumoniæ and the streptococcus. It is patent therefore that bronchitis requires restriction, if not so completely as do more highly infectious diseases, at least sufficient for the protection of those whose business requires them to frequent crowded places.

The conditions favoring the spread of pneumonia, are very obscure. Wells believes that the increased facility for travel, and the tendency for people to congregate, may serve to account in a measure for the numerical increase of the disease. Walsh believes that it may be due to the highly infectious character of the disease and the neglect of prophylactic measures in crowded centres.

Anders speaks of the advent of epidemic influenza as being a determining factor; this is now universally conceded. He also points out the results that have followed the wanton destruction of native forests; the changed meteorologic conditions that have sprung therefrom, the increased variability of temperature and humidity.

There may also be far more importance than we have supposed attached to the augmenting prevalence of visceral degenerations, particularly of the cardio-vascular system and the kidneys. These conditions, it is known, predispose to fatality in pneumonia. Of 275 fatal cases of lobar pneumonia on which necropsies were done, reported from the Philadelphia Hospital, from Jan. 1st, '96 to March 1st, '03, (Anders, *J'l Amer. Med. Assoc.*, May 9th,'03), 250 or almost 91 per cent. presented some cardio-vascular lesion, principally, chronic endarteritis and general atheroma. Renal lesions were recognized in over 90 per cent. of these cases. These patients belonged to the pauper classes and were mostly adults.

It has been found, by inquiry into the vital statistics of New York and Philadelphia, that pneumonia in these places is more or less limited to certain centres, corresponding to denser populations, with their allied conditions of squalor and filth.

The communicable character of acute infections of the respiratory tract, especially in children has been well brought out and strongly in-

sisted upon, by Dr. Zahorsky, he claims for them, the same bacterial agents that have been described for acute bronchitis and for many of the pneumonias.

The physician owes another duty to the public, and this is, the concientious and unfailing habit of reporting every case to the health authorities. This is a solemn duty. We are too isolated in our work for it to effect the community except through these channels. Our chief work, as practicing physicians must remain in the mind of the patient, who is, or has been sick. He must have received his lesson from us; and it lies with him, with his own free will, to enact or leave undone, those responsible precautions that we have urged upon him.

Plainly, this is not sufficient, it offers but meager security, but it is all that the practicing physician can do, left to himself.

It is with such thoughts in our minds, that we should not fail to subscribe what help we can to the municipal authorities, whose acts are laws, and whose duties have nothing to do with the conscience of the individual patient.

OBLIGATIONS OF THE PRACTICING PHYSICIAN TO HIS PATIENT AND THE PATIENT'S FAMILY IN INFECTIOUS DISEASES.*

BY C. H. POWELL, M. D., ST. LOUIS.

Many intricate problems aside from actually ministering to the wants of our patients afflicted with some of the varied infectious diseases claim our most careful attention; these problems not only relate to the tendencies characteristic of the particular disease in question towards extension to more vital parts or organs in the patient, which if developed will kill,but also to adapt all the means that our experience teaches us to ward off and prevent the accession of more pernicious forces which ever tend to engraft themselves upon soil suitable for their lodgment and development. Thanks to the researches of Koch, Behring, Roux, Klebs, Sanarelli and scores of other prominent investigators our knowledge of the specific causes of many diseases of an infectious nature are better known at the present time than ever before. Diphtheria which but fifteen years ago was instrumental in carrying off a large proportion of our little ones upon whom the necessity of tracheotomy and intubation was commonplace had associated with it days and weeks of suffering; suffering characterized by septicemia and pyemia, and followed by abscesses, paralysis, deafness, Bright's disease, and many other serious conditions was only too often brought to a sudden and fatal termination by the advent of heart failure. Fifteen years ago when this disease made itself known in a family of several children it was common practice to send the uninfected children to other homes with the ever present apprehension in our minds, although hoping for the best, that the disease might develop at other points, and such was actually the case in a great many instances which no doubt many of my audience will acknowledge. In those days we had no drug we could give, no means we could employ aside from antiseptic gargles and mouth washes with changes of clothing which when removed was thrown into boiling water or actually destroyed. Compare conditions of fifteen years ago with to-day. Diphtheria is no longer the dreaded visitor it was thanks to Behring and Roux; in antitoxin we can not only stamp out the infectious principle at once if administered early, but by the use of this subtle serum in the non-infected members of the family the disease rarely makes its appearance. The value of this remedy can be truly appreciated by those followers of Aesculapius who battled with diphtheria prior to the introduc-

*Read before the St. Louis Medical Society, February 10, 1906.

tion of this great remedy to the profession. Consequently it is the duty of the physician to apply antitoxin in every case of diphtheria, it is imperative upon him to do so as soon as the diagnosis is made; if he is in doubt, and awaits the microscopical report, give antitoxin while he is waiting; no harm will accrue, and great benefit follow if the Klebs-Loeffler bacillus is reported. In doubtful cases, however, I never give the immunizing dose to the other members of the family unless more than one is sickly, languid or out of sorts. If such is the case I use antitoxin on all; otherwise keep the children apart and await the microscopical report; if favorable, no immunization is required; if the contrary, antitoxin is promptly injected. In the management of this disease our obligations to our patient are: The early and immediate use of antitoxin if the case is at all suspicious or doubtful. The isolation of the patient to himself or herself. Due regard for thorough disinfection of whatever passes from the buccal cavity or other secretions as intestinal or renal. The frequent use of antiseptic sprays not only to loosen up the membrane but to keep the mouth clean. Rags or towels used about the patient should be either burned or cast into boiling water. The family should be kept away from the patient if possible and the services of a trained nurse secured; if this is impracticable who ever nurses the patient must be carefully instructed of the danger of allowing the infected patient to cough in her face and not to mingle with other children in the same clothes worn while in the sick room.

In typhoid fever the contagious principle escapes especially from the gastro-intestinal tract, and accordingly our duty to the patient's family lies in cautioning them to employ strong disinfectants after each bowel movement not only to destroy the infectious germ in the feces but the bed-sheets in particular must be summarily dealt with as the virulent germ is always to be found on the bed linen regardless of the care employed in cleansing the patient. The utensils used by the patient should also be most thoroughly dealt with before being allowed to pass into other hands. Inasmuch as pneumonia occurs in many cases of typhoid fever often from inattention to the patient's mouth we owe him a duty to use antiseptics liberally not only to remove the sordes from his teeth but to make the mouth an unfavorable soil for the diplococcus of Fraenkel. The complications and sequelæ that are wont to occur in typhoid fever, and that can often be prevented by care, and a knowledge of the possibilities are sufficiently well known to us all; suffice to say that our duties and obligations make it incumbent upon us to be ever on the *qui vive* for action.

The knowledge we have within the past few years gained of the part played by the mosquito, the anopheles claviger, in the production of malaria or intermittent fever and yellow fever has at once given us an insight into the necessity of not only keeping these insects away from the healthy persons to prevent infection especially in yellow fever but also to prevent the insects from biting

the victim of the disease as the poisonous principle is in this manner rapidly dissipated to others whom the infected insect may later attack. In bubonic plague it is a recognized fact that the spread of the disease is attributable to the presence of rats about the premises in unusual numbers; accordingly to check the advance of the disease destruction of the rodents is in order besides the general attention to cleansing up of the premises, attention to isolation, disinfection, etc.

In Asiatic cholera which is usually communicated by the food or water employed by contamination with the comma bacillus, the specific germ of this disease, attention should be directed towards security as pertains to the source of the food used, and efficient sterilization of the water imbibed by thoroughly boiling the same to destroy any signs of germ activity. Dr. J. R. Hereford who but a short time ago returned from the Philippine Islands to St. Louis, and who had a large experience with cholera Asiatica while there advised me of the peculiar freaks manifested by the disease which in many instances would progress up the rivers instead of downstream as would be expected, and that during his stay in the service of the army as surgeon he had occasion to note two visits of cholera to the Islands. The first visitation was characterized by certain towns being entirely skipped, not a single case developing, but when the second visitation occurred these previously exempt towns during the first visitation were the very first places where the disease broke out, and the fury with which it attacked the citizens together with the very high mortality with which the disease was associated impressed him as rather singular. Some towns the doctor stated were almost completely wiped out from the ravages of the disease. The doctor also advised me that every subterfuge was often employed by the natives to prevent the filling up of infected closets, wells, etc., rendering the work at times unusually arduous. What antitoxin is in immunizing doses as a prophylactic of diphtheria, vaccination is as a preventative of variola; accordingly should a case of smallpox break out in a family we should vaccinate every member without hesitation. In conclusion I will say that in my paper I have dealt rather in generalities as the subject that has been allotted to me by your worthy committee is a rather extensive one. It is clearly an impossibility for me to do justice to all that can be said in such limited time.

MUNICIPAL CONTROL OF INFECTIOUS DISEASES.*

BY C. A. SNODGRAS, M. D., ST. LOUIS.

It would hardly be proper for me to review even in a cursory manner the history of preventive medicine. Among the ancient people the Jewish ranked highest in their sanitary regulations. The Greeks did much to keep their people strong and healthful and the Romans were energetic in stamping out plagues. In modern times the English have probably ranked the highest. In our own country Massachusetts was the first state to enact laws for the prevention and control of diseases. It was in 1797 that Massachusetts gave the municipal board authority to regulate infectious diseases, but it was not until 1849 that a movement was put on foot whereby a state board was provided for and it was twenty years later, in 1869, that Massachusetts got this state board. I might hold out this experience as an encouragement to you who are working so arduously for a visiting staff to the City Hospital.

It might be well for you to ask yourselves if you have reported to the health officers of the city every case of the diseases named in ordinances. If not, then you have violated the law. From the limited number of such diseases reported by some who are engaged in general practice and working among children, one would think that their practice was confined chiefly to dysentery, cardiac diseases and the neuroses. It makes no difference what the law is, if every physician and every officer in this city would do his duty we would not need the shakings up we have been getting in the departments of the municipal government. It is not the law but the observance of the law that is important.

Following the report of a case of scarlet fever, for example, an officer is sent to the house, examines and placards the same, and notification is sent to the school which the children attend. The object of the lengthy record made by the officer who goes to the house is for the data we are trying to collect. The public library is also notified when a book from the library is found in the house where a contagious disease exists. After the health officer has fumigated the premises, notice is sent to the school to this effect.

In regard to the reporting of cases of consumption, the department has not pushed this matter very ardently. At first there was a great deal of objection to this ordinance, but now it is better observed and we have sanitary officers visiting these cases and collecting data for further use.

In cases of typhoid fever, until recently it was the custom to go out and disinfect the plumbing, toilet rooms, etc. Now this is left to the judgment of the physician and un-

*Read before St. Louis Medical Society Meeting of February 10, 1906.

less he thinks it necessary, the house is not fumigated.

In New York City the regulations regarding consumption are such that there is a general overhauling of the premises, putting on new paper, calcimining, painting, etc., and the landlord is supposed to do this work. There is a complete washing of the walls and floors with some liquid disinfectant, which is found to be more satisfactory than formaldehyde fumigation.

In this city it is left with the physician to notify the department of contagious diseases, then the department loses no time in acting upon this information. With all due credit to the health departments of other cities, I do think that the work of disinfection done here is second to none in the world. The method consists of open pots from which formaldehyde is regenerated. It is a little more expensive, costing about $16 to fumigate a house of eight rooms. If we used wood alcohol and generated the formaldehyde with a machine it would cost about $12. St. Louis was the pioneer in the method, and is now spending more money for disinfection than any other city in this or any other country. But you can not disinfect the throat or the surface of the body of the child and where cases have come from a house that has been disinfected it was not due to faulty disinfection but to this fact.

There are many physicians who fail to report cases of measles, whooping cough and chickenpox. The percentage of deaths from whooping cough is very high, yet little attention is paid to it. I believe the results are very satisfactory with the system as it now works but if only a few physicians report these diseases then it will be unwise to try to enforce the ordinance. Probably if the law was more severe we might get better results. A great injustice is done the conscientious physician who obeys the law. These physicians report cases and lose their practice in the families of their patients. One of our ablest pediatrists lost one of his best families because he reported a case of diphtheria, and they objected to the quarantine. I believe that the construction of an isolation hospital would be of great service. Glasgow opened in 1870 the Belvidere Hospital for fever cases and later London opened a hospital for fever cases. The South Department Boston City Hospital is probably second to none in the country. Those who disigned the City Hospital here provided just such a building but that building is now being used for some other purpose. If we are able to use this building for the purposes for which it was intended it would be very efficacious in controling infectious diseases and for teaching purposes. In an hour or two in the Boston City Hospital I learned more about infectious diseases than ever before in so short a time, when Dr. McCullum took me around with his class and showed us probably twenty cases in the various stages of intubation, explaining the details, etc. The question is, if we open such a hospital would it be taken advantage of by the physicians of the city. I think it would.

DUTIES OF THE BOARD OF EDUCATION IN THE CONTROL OF INFECTIOUS DISEASES.*

BY W. G. MOORE, M. D., ST. LOUIS.

When I was assigned the subject "What Should the Board of Education do to limit the spread of Contagious Diseases?" I thought it could be answered in a single paragraph, viz.: do that which the Saint Louis Medical Society requests it to do; since the board is a body of intelligent gentlemen who desire to further the interests of the city as far as lies in their power. As constituted, all the members are laymen with one exception—the exception being a physician.

I occupied for six years the same position now filled by Dr. Magoon and during my incumbency this same question came before the Board for settlement in the form of a motion to appoint physicians throughout the various sections of the city to visit the schools at regular intervals for the purposes of examining any complaining pupils and decide their fitness or unfitness to remain in the school. As I remember it, every member of that body was in favor of the plans and readily admitted its advantages; but the ever present question came promptly to the fore—"What will it cost"? and without this question being answered it was decided "we could not afford the expense."

At that time the board was struggling with inherited debt—handed down from previous boards whose conduct had disgraced the city. This was the first elected board and was bi-partisan in politics. How well they and their successors have carried out the trust imposed in them by the people, I cite you to the number of unsurpassed school buildings and the public records of their acts. Since these improvements have been made and for the most part paid for, it would seem that a much larger fund should now be on hand for further improvements than was at our command and therefore this should be a more opportune time for presenting this question again for solution.

Before presenting it however, there should be formulated by this society a set of concise *practical* resolutions setting forth the consensus of our opinion as to the best mode of encompassing our ends.

Up to the present time the board of health has a rule requiring that each pupil in attendance must give satisfactory evidence of having been successfully vaccinated. Even this single rule gives no end of trouble to the superintendent of instruction and teachers by reason of the fact that such bodies as the anti-vaccination society and their individual adherents existing in every community object to having their children be-

*Read before the St. Louis Medical Society, February 10, 1906.

ing made immune to variola for their own and others safety. Then the existing belief among a large number of people that the immunity from vaccination "lasts seven years" and they refuse further vaccination until that time has elapsed and the parents alone are the computers of the time. Until one is brought in direct contact with these people, imbued with the idea that they are safe guarding their offspring against possible tetanus, syphilis and other diseases—he can not appreciate how fully Ananias and Saphira obeyed the Scriptural injunction to increase and multiply on the earth.

Physicians are often culpable in their negligence in considering the importance of the certificates they give regarding the effectiveness of scars certain children may have—many of them bearing no more resemblance to true vaccination marks than scars made from any other cause.

Another rule is that governing the return of children to school after absence on account of infectious diseases. Again the physician's certificate becomes the much coveted and all important passport to their places formerly occupied by the children in the class rooms.

Take scarlet fever for instance, than which few if any disease is more infectious and there is no fixed limit of time for them to remain away—when the questions in the printed form are satisfactorily answered by the physician in attendance. The most important of these is—"has desquamation ceased?" We all know the wide variations in the time when this phenomenon disappears in different cases—mild and severe. What applies to scarlatina is equally applicable to other diseases of childhood and when we remember the well nigh impossibility of fixing definitely the *exact time* when infection begins and ends you readily see how difficult is the task of answering the question "What the Board of education should do in preventing the spread of Infectious Disease"? But the difficulties of the task should not deter us. On the other hand, the knowledge of the great benefits to those who are ignorant of their own dangers as well as that much greater and more intelligent number who are always obedient to the laws laid down for their safety, should spur us on to continuous exertion for the saving of lives by preventing the spread of contagion.

There are 84,333 children attending the Public Schools, 1953 teachers looking after their sanitary as well as their educational welfare. What shall the St. Louis Medical Society do to help them in their work?

First: Improve the present laws as far as possible and every physician constitute himself a committee of one to see that they are carried out in the spirit and to the letter of the law.

Second: Post a framed copy, in clear type of the laws, in the halls and other prominent places of every school in the city, that each child capable of reading them may familiarize him or herself with their provisions and carry the news home to his parents who are thus prepared to comply with them.

Third: That principals and teachers be requested to impress their importance upon the children by lectures upon the subject at stated intervals during the school term and that parents be invited to attend said lectures.

Fourth: That the Board of Education shall employ the requisite number of competent physicians to visit the schools at stated times whose duty it shall be, to use all diligence in detecting and isolating as far as possible children with infectious diseases.

I would suggest that we should procure copies of similar laws governing the schools of other municipalities of our country and take from them that which is good and make them better if possible.

DISCUSSION.

Dr. William H. Stauffer:—I would only refer to the reporting of those cases to the sanitary officer. I have frequently been present when the inspector called and the inspection has not always been thorough. In several cases, especially of typhoid, when the unsanitary conditions were reported they were not corrected either by the family or the agent, and later other cases occurred. There should be some law to prevent such a state of affairs and to enforce the correction of these conditions.

Dr. W. C. G. Kirchner.—Speaking of the reporting of births and the transmission of diseases to the newborn, I would like to know what the ordinances are. My impression was that the midwives treating such children should attend to the eyes. There are at present three or four children at the hospital with gonorrhoeal infection of the eyes. This infectious disease has not been spoken of but it certainly demands attention.

Dr. John Green, Jr.:—There is a state law compelling midwives to report to a qualified physician any case of discharge from the eyes of infants occurring within a few days after birth. Dr. M. H. Post, of this city, was largely instrumental in getting this law passed. As far as I know not a single prosecution has taken place under its operation. Why is this so? Simply because the oculists to whom these cases are eventually brought have shown a shameful indifference and by refusing to report these cases to the proper authorities have connived at the continual violation of the law.

Dr. Powell:—I would like to know what experience the gentlemen have had with the Widal test in typhoid fever. My experience has been negative.

Dr. Bleyer, in closing:—From my experience in the tenement districts, I believe that it is these cases that need hospital accommodation. The statistics from New York City show that they have 670 beds for the use of infectious cases, other than smallpox; Philadelphia has 290 and Boston 700. Cleveland has 200 beds and other cities have made some provision for such patients. Baltimore is the only city that has no such provision. It is apparent that St. Louis stands low in the list, and that increased facilities for the care of infectious cases is imperative.

Dr. Snodgras, in closing:—It was this society that first advocated the

importance of changing our public water supply, and truly the better class of our profession would now be glad if disease was wiped from the land. They would fall naturally into some other vocation. As to the time of fumigation after the department has been notified that the disease has terminated, the department does not like to go behind the report of the physician, but taking for an example the case referred to by Dr. Fleming where he said he was called to see a case of scarlet fever on the fifth day of the disease, that the case ran its normal course and on the ninth or tenth day the child was well, without any disrespect to the sincerity of Dr. Fleming's question I will say that I think the department was sparring for time. We notice many such cases. Recently a doctor called for fumigation on the sixth day after the onset of the disease. In the mildest case of scarlet fever the limit is stated to be six weeks. Dr. McElwee's statement shows where the trouble lies. You ask for quarantine release too soon. Dr. Hill, of Boston, reports that four weeks was about the average time when the diphtheria bacillus disappeared from the throat, and Holt and Roach found that to be true. As Fraenkel says, no individual has a right to go out in society when he carries infection on his person. It is true infection can be spread even through the mucous membrane after desquamation is completed. As to whether the doctor would be guilty of breaking a pledge of trust if he reported such a case of tuberculosis, as has been mentioned, tuberculosis, if an infectious disease, would go in the same category with other infectious diseases. In regard to tuberculosis the city health department is moving very cautiously. They are planning some wide innovations. Some one has spoken about scarlet fever patients running around among the general public. Light and air is what is needed, it is true, but it should be remembered that where other's rights begin the patient's rights end, and they should not be allowed to infect others. It is to be hoped that the parents will be encouraged to send their children to the hospital for infectious diseases, when one is established, for the only way to control these diseases is to isolate such cases.

THE PRESENT STATUS OF PELVIMETRY.*

BY HUGO EHRENFEST, M. D., ST. LOUIS.

Every textbook of obstetrics devotes considerable space to the elucidation of the rationale and the technique of the various methods of pelvimetry; every teacher of obstetrics emphasizes the manifold advantages of pelvimetry and recommends the mensuration of the pelvis as an essential part of the routine examination of every pregnant woman. And what is the result of all these energetic efforts? It is practically nil.

If it would be possible to calculate exactly the proportion of the measured pelves to the total number of confinements in the hands of physicians who have been taught the art of pelvimetry, I do not doubt, the percentage figure would be found extremely low, probably so low, that it would be justifiable to say: Pelvimetry is not practised, neither by the general practitioner nor by the obstetrician. The man, who in accordance with the suggestions of his teacher, measures every pelvis certainly is a *rara avis*.

How can this striking discrepancy between theory and practice be explained?

For some time I have tried to answer this question and I have almost persuaded myself that I have found at least a few of the reasons for this evident neglect of an undeniably useful method of examination. Briefly stated these reasons are the following: *The term pelvimetry is misleading. Most writers make unjustifiable and exaggerated claims for the utility and accuracy of the various methods of pelvimetry. The practical importance of an exact determination of the size of a pelvis, or more correctly, of the length of one or two of its diameters is generally overrated.*

My views are based upon practical experience with almost all methods of pelvimetry and a careful study of the literature on the subject. For obvious reasons I shall refrain from giving here lengthy quotations from textbooks and papers which readily would prove the justification for my adversely critical attitude.

All textbooks define pelvimetry as the method of determining the size of a pelvis and certainly the term implies this meaning. I do not know, however, of a writer who adds to this definition the statement that we do not possess such a method.

Our most valuable methods of internal instrumental pelvimetry permit to measure solely the length of the true conjugate with a satisfactory degree of accuracy. The antero-posterior and the transverse diameter of the pelvic outlet can be determined with a tolerable degree of exactness. Modern pelvimetry is

*Read before the St. Louis Medical Society, November 4, 1905.

thus practically limited to the mensuration of these three diameters. Roentgen-photography promised to solve the problem of determining the size of the entire pelvis, but soon it was found that the pictures were too distorted to permit a reconstruction of the actual shape and size of the pelvis. In spite of very ingenious contrivances, which of late have been suggested, the difficulties as yet have not been overcome. X ray photography at the present day is still practically valueless for the purpose of pelvimetry, although the author of one of the latest textbooks of obstetrics devotes some space even to a description of the process of developing photographic plates.

But the word pelvimetry is misleading still in another respect. With the exception of only two methods, we do not possess any means of ascertaining the length of any of the pelvic diameters with accuracy enough to justly permit the use of the term "measure" for this kind of rough estimation and calculation. Both in internal and external pelvimetry, when executed on the living, we measure the distance of ill-defined points, which are covered with a thinner or thicker layer of a soft compressible tissue. This fact alone precludes exactness. A variation in the force with which the ends of any of the pelvimeters are brought in contact with the two points, marking the diameter, will of necessity lead to variations in the results. If the same diameter is measured repeatedly, either by the same or by various examiners, the result will be a different one each time. In spite of the utmost care these differences will amount to several millimeters, and in the mensuration of external diameters even to one centimeter. They are unavoidable. But this fact is very seldom duly emphasized by writers. Many delight in giving in millimeters the length of pelvic diameters measured in the living and some give them even accurate to the fractions of one millimeter. This is hypocrisy—to say the least—and such writers are largely responsible for the deplorable fact that pelvimetry is not as generally used by the general practitioner or the obstetrician as it should be. It must be an extremely discouraging experience of the beginner to encounter these inaccuracies in his mensurations, if he is not informed about them. We should not be surprised if he soon gives up the pelvimeter.

The misapplication of the Greek word "metron" (measure) in the word pelvimetry becomes quite apparent by a comparison of what a term like external pelvimetry suggests and what in reality it means.

When Baudeloque in 1775 devised his calipers and described his method of measuring the external conjugate, which in his honor is called the diameter of Baudeloque, he considered the problem of pelvimetry definitely solved. Smellie had invented his method of digital mensuration of the diagonal conjugate several years before, there were already instruments existing for the mensuration of this conjugate (e. g. that of the elder Stein) but Baudeloque was convinced that his external pelvimetry was the more reliable and more useful method and I am afraid

a few of the modern textbook writers still share Baudeloque's opinion.

External pelvimetry is based upon the principle, first suggested by Baudeloque, that there exists a definite proportion between the length of the external and internal diameters of the pelvis, or in other words, that by means of certain subtractions from the length of an external diameter the length of the corresponding internal diameter can be determined. This principle is today recognized as absolutely erroneous. This constant proportion does not exist, not for any one of the various diameters, and certainly not between external and true conjugate.

The points commonly used in external pelvimetry are: the spinous process of the last lumbar vertebra, the anterior superior spines and the outer edges of the crests of the iliac bones, and the heads of the trochanters, that is points which do not stand in any immediate connection with the bones constituting the small pelvis. The variations in the thickness and shape of the sacrum, symphysis, femur, etc., in the thickness of the soft parts covering the points, from which the measurements are taken, are such as to practically exclude the possibility of determining in the individual case how much the deduction should be. In the light of most painstaking investigations it seems absurd to draw any positive conclusions regard the size of the pelvis from these external diameters, but very many writers still do it. Although practically unfit for the determination of the *size* of the pelvis, external pelvimetry, as will be later shown, must be regarded a very valuable method in the recognition of an anomaly in the *shape* of the pelvis.

One more fact may be mentioned in support of my contention that the utility and accuracy of the various methods of pelvimetry in general is exaggerated. Every textbook of obstetrics contains the well known picture which illustrates the digital mensuration of the diagonal conjugate: a median section through a pelvis with the hand of the examiner in the typical position, the thumb pressing against the outer surface of the symphysis, the tip of the middle finger resting against the promontory, the third and fourth finger folded into the palm. If you look at such a picture with the critical eye of the artist, you will easily recognize that this middle finger always is considerably out of proportion, quite hypertrophied and elongated. Of course, the artist, who draws such an illustration and the student who is enlightened by it, do not know that it is impossible to reach the promontory with a normal sized hand in a normal sized pelvis as long as there is a normal perineum present. Illustrators with artistic feeling, therefore, use for their illustrations a median section through a dried pelvis and then place the fist of the examining hand somewhere into the pelvic cavity, where it never can be placed in the living woman. This hypertrophied middle finger is a rather typical feature of illustrations pertaining to pelvimetry and kindred subjects, because it is not generally understood that the diagonal conjugate can be measured only in contracted pelves.

And what is the practical value of a knowledge of the length of the diagonal conjugate?

In order to obtain the length of the true conjugate in normally shaped pelves a deduction of about 15 to 18 millimeters must be made from the diagonal conjugate. In abnormally shaped pelves the necessary deduction varies between nothing and 30 millimeters according to investigations made on cadavers. This fact implies a degree of inaccuracy which would make the mensuration of the diagonalis valueless, if we would not have some means of estimating in some manner the amount of the subtraction necessary in the individual case. The experienced examiner actually learns to estimate the height of the symphysis, its inclination and the relative position of the promontory to the plane of the pelvic inlet, and from these observations approximately determines the deduction to be made from the diagonal conjugate. But of course, since the exactness of the determination of the length of the true conjugate by this method is entirely dependent upon the versatility and the judgment of the examiner the value of the method in general practice becomes limited. It should be well borne in mind that the unavoidable inaccuracy of an estimation of the length of the true from the length of the diagonal conjugate, may easily amount to one-half centimeter and more. If writers, as is the common practice, in this manner "measure," in reality roughly guess, this diameter, then speak e. g. of a true conjugate of 77 millimeters and make learned deductions whether such a diameter necessitates the one or the other obstetric operation, they clearly transgress the limits of propriety. In my opinion they would serve the cause of pelvimetry better by speaking more modestly about a true conjugate somewhere between seven and a half and eight cm. remembering at the same time the fact that even that may be incorrect.

The danger of a positive reliance upon this method of determining the length of the true from that of the diagonal conjugate is convincingly shown by a case which is quoted in a recent article by Sellheim. He found in the pathologic museum a generally equally contracted pelvis with a diagonal conjugate of nine cm., in which the true conjugate also measured almost nine cm. This pelvis belonged to a woman who had given birth spontaneously to a full term child. If this diagonalis would have been measured before labor and the length of the true conjugate estimated by a deduction of only two cm., Cesarian section would have seemed the only possible means of delivering this woman of her child.

I shall next take up the consideration of the accuracy of internal instrumental pelvimetry. But before doing so it seems necessary to give a brief resume of the various principles underlying the different methods which are used at the present time.

Practically all instruments designed for the purpose of internal pelvimetry can be grouped according to three principles of pelvimetry.

The first principle, the oldest one,

is that of direct mensuration. It has been invented by the older Stein and Coutouly. It comprises the pelvimeters with which the true conjugate is directly measured by bringing the end knobs of the two branches of the instrument simultaneously in contact with both the promontory and the symphysis. Such pelvimeters either resemble the shoemaker's sliding scale, or consist of a pair of bent levers, hinged together in the middle without being crossed, like the arms of a glove stretcher. A compression of the two ends on one side causes a corresponding separation of the other ends of the two arms. The latest of the numberless variations and modifications of the well known "Pelvimeter of the older Stein" has been recently described by Solowij. The principle of the sliding scale, first invented by Coutouly in 1810, is employed in Farabeuf's pelvimeter, which is described and recommended in some of the modern American textbooks of obstetrics. The instrument recently described by Bylitzki belongs to this same group.

The one chief shortcoming of all instruments which attempt the direct mensuration of the true conjugate lies in the fact that during mensuration the instrument at the same time touches both the promontory and the symphysis. The stretching of the vagina necessary for this purpose implies numerous disadvantages, among them the following: The procedure is extremely painful; the vagina may be injured and occasionally the end of the arm, destined to reach the promontory, has perforated the vagina; if the vagina is rigid, i. e., in most primigravidae, the measurement obtained in this manner, in all probability will be too short. Obviously many efforts have been made to eliminate the faults of this method. The ends of the promontorial branch of the instrument have been made broad and blunt, spoon shaped or have been armed with large buttons. But such modifications lessen the precision of the instrument. In order to overcome the difficulty and necessity of stretching the vaginal wall, instruments have been constructed in which the posterior promontory branch is introduced through the rectum, and others in which the anterior branch is slipped through the urethra. It can be easily understood why these modified instruments have not been adopted for general use.

The second group comprises the instruments which measure the true conjugate indirectly by means of a principle which is known as that of into-external pelvimetry. By palpation a point is determined on the mons veneris in front of the pubic symphysis which represents a direct continuation of the true conjugate to the skin covering the symphysis. This point is marked and measurements taken from it to the promontory and to the inner surface of the symphysis respectively. This last measurement indicates the thickness of the symphysis. A subtraction of this dimension from the distance between marked point and promontory gives the length of the conjugata vera.

To Wellenbergh (1831) belongs the credit of having constructed the

first practicable instrument based upon this principle of indirect mensuration. The Wellenbergh instrument was first successfully improved by Van Huevel and later (1887) by Skutsch. The latter's instrument is at the present day probably more generally used than any other, although most American authorities favor the pelvimeter of Hirst, which is also based upon the Wellenbergh-Van Huevel principle.

The exactness of the results obtained with the various methods of into-external pelvimetry is to a very large extent dependent upon the versatility of the examiner and his familiarity with the use of the particular instrument. It is a decidedly difficult task, even with the help of an assistant, to keep one branch in contact with the middle of the promontory and bring at the same time the end of the other branch near the point marked on the skin in such a way, that it just touches the surface and does not press down the skin. If at the two mensurations, necessary for determining an internal diameter, the end knobs press against the compressible skin with a different force, the result of the measurement of necessity will be faulty. The principle of this form of into-external pelvimetry is not mathematically correct. In practice it is impossible to determine exactly where a direct continuation of the internal diameter, which shall be measured, strikes the skin, and the precision of the mensuration is dependent just upon this point.

It cannot be denied, however, that in spite of these difficulties and inaccuracies an *experienced* examiner may succeed in determining the true conjugate within a few millimeters of its actual length.

A third and entirely new principle has been introduced into instrumental internal pelvimetry by an instrument devised by me in co-operation with Dr. Jul. Neumann of Vienna. (A detailed description of this method can be found in Am. Jour. of Obst., May, 1903). The principle underlying the Neumann-Ehrenfest Pelvigraph is that of geometric projection. By means of this instrument a drawing can be obtained which pictures exactly the median sagittal section through the pelvic canal in its natural size. Like the methods of into-external pelvimetry pelvigraphy is too complicated for general use, requires trained assistance and special versatility on the part of the examiner. The Neumann-Ehrenfest Pelvigrah has, however, two decided advantages over those methods of pelvimetry which are based upon the Wellenbergh principle. The Pelvigraph is mathematically correct, and by producing an exact diagram of a median section through the entire pelvic canal it defines not only the size but also the shape of the pelvis at least in this one plane. Mention may be made of the fact that the Neumann-Ehrenfest instrument like the Skutch instrument, at least theoretically, can be used for a determination of the transverse diameter of the pelvic inlet. But very little reliance can be placed upon the result of this mensuration.

Finally I may be permitted to advance a few arguments in favor of my contention, that in general exag-

gerated claims are made for the practical value of pelvimetry, or more correctly, for the knowledge of the length of the true conjugate.

J. C. Arantius, a disciple of Vesalius, recognized at about the middle of the sixteenth century the narrow pelvis as one of the most important causes of a delay and at times of an absolute impossibility of the expulsion of the fetus *per vias naturales.* The significance of the narrow pelvis in the etiology of dystocia is today generally admitted. The early recognition of an existing disproportion between the size of the fetal head and the size of the pelvis has become one of the most important tasks of the modern obstetrician. It is obvious that such a disproportion can be definitely ascertained only by determining the exact dimensions of both the fetal head and the pelvis. We do not possess, however, a reliable or even practicable method of cephalometry. But even if we would have such a method we would not be any nearer the solution of the problem. If it were not for the fact that the fetal head is compressible and moulds in the course of labor, no fetal head could pass even through a normal sized pelvis. The moulding of the head is dependent upon the strength and the character of labor pains and upon certain anatomic conditions of the fetal skull, th. i. upon factors which can be neither measured nor estimated. It is obvious that labor may progress normally if in a case of contracted pelvis the pregnancy ends prematurely. On the other hand, a perfectly normal pelvis may prove too small in the presence of an abnormally large head or one which is not compressible or does not mould on account of a deficient action of the uterus. If we to-day base the assumption or diagnosis of an existing disproportion between fetal head and pelvis on the ascertained shortness of the true conjugate, we leave out of our consideration the size and compressibility of the fetal head, or take it for granted, that they are normal. This practice has become general—of necessity, but has thus lead to an unwarranted belief in the importance and practical value of pelvimetry.

It is an interesting and most noteworthy fact that in the teachings of the modern obstetrician concerning the prognosis and therapy of labor in cases of contracted pelvis, practically everything is made dependent upon the length of the true conjugate. This diameter decides the choice between such operations as high forceps, symphysiotomy, hebotomy and Cesarian section. Most practitioners (and I do not mean to exclude by this term the obstetricians) have formed the opinion that the true conjugate actually is the one diameter which in cases of contracted pelvis decides the outcome of labor. This opinion obviously is erroneous. We have learned to be satisfied with a knowledge of the length of this one diameter, simply because no known method of pelvimetry enables us to measure with reliable or sufficient accuracy any other dimension of the pelvic inlet.

In my opinion just this mistaken and unjustified reverence accorded to the true conjugate has e. g. led to the inexcusable neglect of the men-

suration of the pelvic outlet, the only other plane of the pelvic canal which we really can measure. I have already stated that the antero-posterior and the transverse diameter of the pelvic outlet can be determined with a reasonable degree of exactness, especially in patients who are not very stout. The methods employed for this purpose are comparatively simple and the practical importance of a knowledge of these diameters is generally conceded. Authorities, who of late have adopted the measurement of these diameters as a routine practice, contend that contractions of this portion of otherwise apparently normal pelves are decidedly more common than is generally thought. They often account for an unexpected difficulty in the final expulsion of the fetal head which has fully entered the pelvic cavity. As soon as physicians will be more properly and more generally informed of the fact that the contraction of a pelvis is not limited to the inlet and that the recognition of the character and degree of a pelvic deformity is not entirely dependent upon the mensuration of the true conjugate, th. i. upon a procedure which they are not expected to master, they probably will more often resort to a mensuration of the pelvic outlet.

Of course, as long as we cannot measure the size and the compressibility of the fetal head the practical value of pelvimetry or as we may say more appropriately, the practical value of a knowledge of the length of the true conjugate and the size of the pelvic outlet will remain limited. But after all, it is not alone the actual disproportion between head and pelvis which in cases of pelvic deformities leads to anomalies in the course of labor.

A little more than fifty years ago Michaelis from very careful observations concluded that *anomalies in the shape of the pelvis* favor faulty presentations and abnormal mechanism of labor. To-day the fact is generally admitted that an abnormal configuration especially of the pelvic inlet very often is responsible for such condition as face or brow presentation, transverse position, a premature rupture of the membranes or a prolapse of the umbilical cord. It is obvious that in the etiology of such pathologic conditions only the abnormal shape and not the actual contraction plays an important role. From the point of view of practical significance the claim, therefore, seems justified that a physician first of all should be able to recognize the mere presence of a pelvic deformity. But this fact is in general not duly appreciated. We read and hear so much about pelvimetry, but comparatively little about the methods which enable us to diagnose the existence and the special character and type of an abnormal configuration of the pelvic canal.

I shall devote this last part of my paper to a brief consideration of such methods and thus find an opportunity to explain what in my opinion the true practical value of external and internal pelvimetry is.

(*a*). *Clinical History.*

The overwhelming majority of all pelvic deformities develop as the result of rhachitis, osteomalacia and chronic affections of the hipjoints.

A systematic and careful inquiry into the history of the patient will reveal the existence of any one of those conditions.

The history of preceding labors is of still greater importance in multigravidae. Several births of full term children may be accepted as almost conclusive proof that the pelvis is of normal size. No better method of pelvimetry than a normal labor at the normal end of pregnancy. In patients in whom previous confinements were pathologic and had to be terminated by the use of instruments, a careful study of the particular features of labor may permit, if not a diagnosis at least a conjecture concerning the nature of the pelvic abnormality.

(*b*). *Inspection.*

Although not practicable in every pregnant woman an inspection of the stripped patient in standing position should be sought for in every instance in which a pelvic deformity is suspected. The time does not permit me to enter here into a detailed consideration of the actual diagnosis of pelvic anomalies by inspection, but I can assure you that one can easily acquire the ability of recognizing by inspection anomalies in the pelvic inclination, in the configuration, position and inclination of the sacrum, assymmetries, deformities of the vertebral column, etc. Such observations in conjunction with characteristic anomalies in the stature and especially in the gait often permit a positive diagnosis even of the special type of pelvic deformity.

(*c*). *External Palpation.*

The value of palpation in this connection is obvious because rhachitis, osteomalacia, and spondylolisthesis cause marked and characteristic changes in the outlines of the pelvic bones.

(*d*). *Manual Exploration of the Pelvic Cavity.*

Smellie in the middle of the 18th century first described and emphasized the advantages of a digital exploration of the pelvic cavity. Today this procedure is generally accepted as the most serviceable and reliable aid in the recognition of both the character and the degree of a pelvic contraction. The careful examination of the pelvic cavity must be a part of the routine examination of every pregnant woman. Although the technique of this procedure is of paramount importance for its success, I have to omit here its detailed description. The pelvis must be explored in a systematic way. First the height and inclination of the symphysis are examined, then the pubic angle, next the sacrum, its lateral and vertical curvature, the sacro-coccygeal joint, the position and shape of the promontory, the curve of the innominate lines and so on, winding up with a digital mensuration of the diagonal conjugate, if that is possible. I cannot enter into a discussion of the significance of the various findings in the diagnosis of pelvic deformities, but can again assure you that with a routine exploration of all pelves noteworthy deviations from the normal shape are detected with comparative ease.

(*e*). *External Pelvimetry.*

I had occasion in a preceding part of my paper to state that ex-

ternal pelvimetry does not permit any conclusions concerning the size of the pelvis, furnishes, however, a very important aid in the detection of an existing deformity. Fully satisfied that the determinations of the intertrochanteric diameter is void of any practical value, and that practically no deduction can be drawn from the length of the external conjugate, I limit myself to a routine mensuration of the distance between the anterior superior spines and the outer edges of the iliac crests respectively.

In normally sized pelves the interspinous diameter measures between 27 and 30 cm. Such figures do not by any means indicate a normal length of the transverse diameter of the pelvic inlet. Nevertheless the mensuration of these two external diameters must be regarded as one of the most useful means at our disposal in the diagnosis of a pelvic deformity. It has been found that in almost all normally shaped pelves the intercristal diameter is about three cm. longer than the interspinous. On the other hand, in rhachitic pelves this difference in length is so constantly reduced, that the probable diagnosis of a rhachitic deformity of the pelvis can be made whenever the intercristal diameter is found but one cm. longer than the interspinous, or equals its length or possibly is even shorter. The inference, however, cannot be drawn that every pelvis which presents the normal difference of 3 cm. is normal in shape, because in rare instances even in rhachitic pelves this difference of 3 cm. is met with.

In a *generally equally contracted* pelvis the normal shape of the pelvis is preserved. Such a pelvis, therefore, will show the normal difference of 3 cm. between the two diameters with a distinct reduction in the length of both, e. g. D. Sp. 20 cm., D. Cr. 23 cm.

The external mensuration of a *generally contracted rhachitic* pelvis, on the other hand, will demonstrate an absolute reduction in the length of the two diameters with a simultaneous reduction in the difference of their respective length, e. g. D. Sp. 20 cm., D. Cr. 21 cm., while in the *simple flat rhachitic* pelvis the diameters probably would be 25 and 26 cm.

A middle position between external and internal pelvimetry is held by the methods employed in the determination of the size of the pelvic outlet. It would seem advisable to take these measurements in every case.

(*f*). *Internal Pelvimetry.*

At the time of the first internal examination of the patient an attempt should be made to measure the diagonal conjugate with the examining finger. Whenever we are able to reach the promontory in the presence of a normal rigid perineum, we are justified in assuming that the pelvis is contracted in its anteroposterior diameters. If the contraction is marked, if difficulties during labor may be expected and the pelvis is symmetric, an effort should be made to ascertain the length of the true conjugate in a reliable manner, th. i. by means of internal instrumental pelvimetry. For this purpose the Skutsch, the Hirst or the Neumann-Ehrenfest instrument can

be used. Every examiner has special likings in this respect and usually is familiar with the use of but one of the instruments. In patients with a relaxed vagina also Farabeuf's or Bylitzki's pelvimeter may prove useful. It may be well to bear in mind, however, that all these methods yield reliable results only in the hands of the expert. A knowledge of the special type of pelvic deformity, and of the approximate length of the true conjugate together with a careful consideration of other factors, such as approximate size of the fetal head, the history of preceding labors,etc., will in the individual case help to decide upon the appropriate mode of therapeutic interference. The scope of this paper does not permit, however, to enter into a discussion of the practical application of the results of pelvimetry.

My adversely critical attitude toward the manner in which pelvimetry is taught and exploited at the present day must not convey to you the wrong impression that I deny or even do not fully appreciate the value of pelvimetry. I am well aware of the fact that we owe to pelvimetry our present advanced knowledge of the abnormal pelvis, of the various forms of dystocia caused by it and their therapy. I recognize the advantage and regret the neglect of pelvimetry in every day practice. I believe, however, that this useful method of examination would find a wider application both at the hands of the general practitioner and the specialist obstetrician, if more appropriately would be appreciated just how much can be achieved by measuring certain pelvic diameters, and if writers would avoid to create erroneous and exaggerated ideas concerning the utility and accuracy of the various methods of pelvimetry.

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EDITORIAL.

ILLEGAL PRACTICE OF MEDICINE.

At the meeting of the St. Louis Medical Society, March 3rd the Committee on Public Health and Legislation made a report urging the society to take action for the immediate relief of conditions manifesting themselves in four forms:

(1). *Obscene Medical Advertising*: Although this has been an evil of long-standing, and should have received correction under the city ordinance passed over twenty years ago, nothing has actually been accomplished until recently. The history of the King case is now pending on appeal to the supreme court of the state. As indicated by the report of the attorney who conducted that case, and who, under the authority of the society, is further attemping to prosecute the newspapers, attempts are now being made to fix the penalty of the ordinance against these papers that print or publish obscene advertisements. As further indicated in that report, the city attorney's office is unwilling to bring prosecution against all of the papers, but the *St. Louis World* is selected as the victim which is to stand prosecution at the expense of the publisher's association for the purpose of testing the ordinance.

These prosecutions are solely matters of city and not of state action—and yet, as indicated, no action has been taken by the city attorney's office for many years to the end of enforcing this ordinance. This must be for the reason that there was no person or set of persons sufficiently interested to demand and take active efforts for the enforcements of the ordinance. The society need not consider the matter of raising funds for the purpose of securing a fee in these prosecutions, since the attorney undertook them without charge.

(2). *Practicing Medicine in Corporate Forms*: On February 10th, the society had expressed its purpose to have the attorney proceed to the end of the ousting companies practicing medicine in this state from the further exercise of their corporate franchises. Action to this end should not be delayed, in view of

the fact that individuals are being incorporated in quick succession, of late years, for the purpose of evading direct, personal prosecutions. These incorporations should be forstalled and prompt action taken for the purpose of deterring them from uniting in corporate form. There can be no doubt of the outrages perpetrated by so-called physicians united in this corporate form and availing themselves of the corporate shield. Recently the attorney was empowered by the society to go to Jefferson City for the purpose of determining the feasibility of instituting proceedings. While there a list of over one hundred and seventy-five medical companies was compiled, all of which however, are not necessarily objectionable.

Attorney-General Hadley found that his office was too busy at this time with other work even to consider the lending of his name for the purpose of issuing the writ. The matter was asked to be referred to the circuit attorney's office that it may originate from St. Louis, at the same time being a state proceeding. The city has absolutely nothing to do with such proceedings, it being a matter of general state importance and jurisdiction. Neither is it reasonable to suppose that the state office here would proceed with the matter and devote all of its time and attention to collection of evidence, presentation of the case, briefing, etc. This work should be done actually by the individuals who are urging the proceedings. It is, in short, a matter which may be properly presented and pushed to its best ends by being referred to those who may give this matter special attention.

(3). *Midwifery*: Here are presented frightful conditions—evils which cry for a prompt and thorough correction. Information has come to your committee which confirms the notorious facts that nearly all of the practicing midwives are guilty of the crime of abortion. It is claimed that evidence of this practice may be readily furnished and if the crime exists it should be punished.

These are outrages which medical men, above all, should seek to suppress. The initiative should come from the medical profession.

Information further comes to the effect that some of these midwives conduct houses of prostitution in connection with their establishments. It is said to be a common practice, when girls from the country come to them for aid, that they require them in their earlier pregnancy to live as prostitutions, and divide the spoils of their sins to satisfy the greed of these so-called midwives. In one instance, it is said that a midwife, to conceal the traces of her crime of abortion, about to be discovered, chloroformed the offspring and burned it.

The same informant states that it is common for false reports to be turned in regarding births and deaths. In one instance especially the midwife reported a certain death from pneumonia, when as a matter of fact, both the mother and child died as result of the abortion practiced.

It is a notorious fact that at least one of these midwives is a dope-fiend and a drunkard; others of these have served terms in the penitentiary for sending matter through the mails

suggesting treatment to procure abortion, and these same midwives having served their sentences, returned to the city to continue their nefarious practices.

It is said that another one of these contracts to perform an abortion, taking part payment in cash, and thereafter performs no services at all, resting upon the defense that the contract is an illegal one and unenforceable. Many of these practice under assumed names, It is further a well known fact that most of them advertise as doctors, have signs and notices to that effect, when in truth they have no such license whatever. These may be reached effectively only by state prosecutions. City ordinances have but few regulations concerning midwives, and are sadly deficient in this respect. The state law is broad and sweeping. Under this law they must pass examinations in obstetrics; they cannot engage in practice as physicians, and it is made a crime to advertise as such, or to have any sign indicating that they may practice as such. Here too, then, we must look to the state office to be relieved. And here again, in order to realize the best results some one person must be depended upon to give his attention specially to the working up of the evidence, presenting it in proper form, and prosecuting the cases earnestly and vigorously. It may be mentioned here that the midwives have called a meeting of their association for the early part of March, presumably for the purpose of evading or resisting prosecution.

(4). *Physicians Practicing Without License, or With Forged License:* Those practicing without license may be reached through the city office although the state law prescribes a somewhat greater punishment, but those presenting a forged license may be more effectively and properly reached through a state prosecution. They are under the state law, subject to the penalty of forgery.

In conclusion it may be said that practically all of the offenses referred to, with the exception of a part belonging to the last class, are matters more properly for state redress. But whether the matters be prosecuted through the city attorney's, or the state attorney's office, the society can not and should not depend upon the efforts of those departments if it hopes really to accomplish something and is in earnest in its efforts to purge the profession. These departments are too crowded with the many cases which, in the routine of work, consume all their time, to devote special effort toward procuring evidence, ferreting out the facts, and actively and energetically prosecuting the cases. Matters of special importance are always prosecuted at the instance of those specially interested. Witness the King case and the prosecutions against the newspapers—these were cases properly for the city attorney's office, and yet it could not be expected that this office should assume single-handed to do all the work connected therewith, while under the pressure of some hundred cases of arrests and summonses per day.

A special committee consisting of Drs. H. C. Dalton, J. Zahorsky, R. S. Holman, L. H. Laidley, J. S. Myer, J. B. Ross, J. M. Grant, W. H. Stauffer, and J. H. Tanquary

was appointed to assist the committee on Public Health and Legislation in collecting funds for the prosecution of these cases, and it was decided to push the work as vigorously as possible. The committee appeals to the medical profession of the state to send them information relating to any irregularity in the practice of medicine in the City of St. Louis. Communications should be addressed to any member of the committee, viz: C. M. Nicholson, chaidman, 4500 Olive St., Robert Luedeking, 1837 Lafayette Ave., or Hugo W. Bartscher, 829 Bremen Ave.

THE PROGRAM.

Elsewhere in this issue will be found the program of the Forty-ninth Annual Meeting of the Missouri State Medical Association to be held at Jefferson City, May 15, 16, 17.

The first day will be devoted to the meeting of the House of Delegates and the Judicial Council. It is believed that practically all business of the Association will be transacted on the first day.

The second and third day will be devoted to scientific work, which is to be held in two sections. Besides the President's address and Orations on Medicine and Surgery, sixty-four papers will be presented. Jefferson City, because of its commodious assembly rooms, hotel accommodations and railroad facilities, should be a most desirable meeting place and a very large attendance is expected.

AFFILIATED SOCIETIES.

The proper officers of the affiliated societies are urged to send in their reports at the earliest possible time. As yet not more than three-fourths of the societies in the state have paid dues for 1906 and it is especially to be hoped that these reports will be made without unnecessary delay.

A LIST OF DELEGATES.

On page 708 will be found a list of delegates as reported to the State Association by the affiliated county societies. In several instances the name of the representative of the affiliated society was not received in time for our April issue, but it will appear in our May number. The increase in the number of delegates this year is due principally to the increase in the number of societies.

RAILROAD RATES.

The Southwestern Passenger Association has announced a rate of one and one-third fare, certificate plan, for the round trip to Jefferson City on account of the annual meeting of the Missouri State Medical Association. It will be necessary for members to take a receipt from the agent for full fare when paid. This receipt should be turned over to the registrar at the entrance to the Association meeting hall and, when properly signed, it will be accepted by the station agent at Jefferson City for one-third fare. In

order to get the rate it will be necessary to have one hundred certificates, but as at the last meeting five hundred and twenty were registered it seems reasonable to expect at least seven hundred and fifty at the Jefferson City meeting.

GENTRY COUNTY.

Dr. E. H. Miller, Councillor for the third district, is to be congratulated that another of his counties has become organized and in affiliation with the State Association. The latest addition to the list is Gentry county, with G. W. Whiteley, president; J. N. Bargar, vice president; J. N. Conrad, secretary; G. N. Smith, treasurer; board of censors, C. B. F. Grantham and Edwin Lewis. Members, G. W. Whiteley, Albany; J. N. Conrad, Albany; G. W. Smith, Albany; W. T. Martin, Albany; G. W. Doyle, Albany; J. N. Barker, Darlington; C. B. F. Grantham, Stanberry; S. B. Hinkley, Stanberry; Edwin Lewis, Stanberry; —— Crockett, Stanberry; W. M. Brooks, Stanberry; Fred Hinkley, Stanberry.

Congress has couched a lance in the patent medicine fight. "Let the label tell," the watchword and principle of the pure food campaign, has been applied to the proprietary nostrum business in the Pure Food bill now under consideration, and with dismayed effect upon the trade. Under the present system of fraud and imposition, patent medicine labels "tell," it is true—but what? Mainly lies. For example, that the opium laden soothing syrup which stupefies children into quietude is "perfectly harmless;" that the hopeless consumptive may be cured by swallowing some concoction of morphine and chloroform; that dilute sulphuric acid, when trade-marked "Liquozone," or raw alcohol embellished with the name "Peruna," acquires thereby magical powers of exorcising the demons of sickness from all and sundry. Quite a different story will appear on the nostrum bottle should the pure food bill become a law. First, the label must state accurately the amount of alcohol, opium, cocaine, or any other poison contained in the article. Second, the claims to curative properties must be true, for if the package or bottle bears any statement which is false "in any particular," the product is misbranded and therefore illegal. Beyond self-revelation in the matter of poison, the label may be as reticent as it chooses. Ask it no questions and it will tell you no lies. In silence it may find its refuge, but with silence how much of romance and fulgent imagery dies away. In the arid prospect the light that never was on land or sea fades out of the benevolent countenance of Lydia Pinkham. From between the chaste lines of Dr. Kilmer's side whiskers issues a weak censored line of pledges to our kidneys. What Dr. William's Pink Pills will do to the pale people in the matter of mental, moral and physical regeneration is banished from the box. The Duffy's Malt Whiskey flask is but a shadowy survival of itself and the Peruna bottle that was entered in our last fiction contest goes down to our children's

children as a relic of the golden age of witchcraft. Threats of legislation always bring the quack-protectors flocking to the spot. As the chief protecting agency, the Proprietary Association of America has opened its defensive campaign in Washington by sending on its head press agent, one Beardsley. Shortly before the Pure Food bill came to a vote in the Senate he wired to the principal nostrum firms of the country that Senator Hemenway of Indiana would get in an amendment safeguarding their interests. Senator Hemenway duly appeared upon the floor of the Senate with a letter from Mr. Beardsley, in which that gentleman expressed the pious hope "that no drug shall be deemed misbranded under this bill by reason of any statement made in good faith relating solely to the medicinal properties of the drug or its ingredients." That is, Peruna might, if it so choose, claim to turn negroes white; Dr. Munyou could guarantee to arrest old age, and Hood's Sarsaparilla should not be prevented in any "good faith" agreement to cure rigor mortis. Senator Hemenway, in reading the letter, neglected to inform the Senate that Mr. Beardsley was a paid employe of the Proprietary Association of America. Following further his mentor's lead, the speaker used as types of the patent medicine industry, Pepto-Mangan and Glyco-Thymoline, neither of which, by a strange circumstance, belongs to the Proprietary Association of America. Why this modesty in putting forth typical medicines? Peruna, which has been recently declared a liquor by the Government, would have been an excellent instance; or Kopp's Baby Friend, with its grim list of coroner's verdicts. Both of these are members of the association, yet they were not mentioned. Did the astute Mr. Beardsley fool the confiding Senator from Indiana, or was the latter buncoing his colleagues? As the patent medicine section has been made "Watertight" in the House, the fight will be transferred thither, and the country will see and recognize the Congressional defenders of the Great American Fraud.—*Collier's Weekly.*

MISSOURI STATE MEDICAL ASSOCIATION.

Jefferson City, May 15, 16, 17, 1906.

OFFICERS.

1906.

PRESIDENT.

D. C. GORE, M. D. ..... Marshall, Mo.

VICE PRESIDENTS.

C. D. AVERY, M. D. ..... Troy
J. P. BURKE, M. D. ..... California
F. A. GLASGOW, M. D. ..... St. Louis
T. F. LOCKWOOD, M. D. ..... Butler
E. LOWREY, M. D. ..... Excelsior Springs

SECRETARY.

C. M. NICHOLSON, M. D. ..... St. Louis

ASSISTANT SECRETARY.

E. J. GOODWIN, M. D. ..... St. Louis

TREASURER.

J. F. WELCH, M. D. ..... Salisbury

COMMITTEES.

ARRANGEMENT COMMITTEE:

S. V. Bedford	C. P. Hough.	J. B. Martin.
W. A. Clark.	L. T. Leach.	O. L. Moore.
C. Enloe.	J. E. Lopp.	W. W. Norwood.
I. N. Enloe.	A. W. McAlester.	J. P. Porth.
G. Ettmueller	J. A. Hill.	E. R. Son.
J. L. Thorpe.		S. C. Yates.

COMMITTEE ON SCIENTIFIC WORK.

C. M. Nicholson, E. L. Chambliss, A. R. Kieffer.

PUBLICATION COMMITTEE.

C. M. Nicholson, F. J. Lutz, B. M. Hypes, W. B. Dorsett.

COMMITTEE ON PUBLICATION AND LEGISLATION.

F. J. Lutz. W. S. Allee. H. E. Pearse.

COUNCILLOR DISTRICTS.*

First District—F. B. Miller, Kahoka. Counties: Clark, Scotland, Schuyler, Adair, Knox, *Lewis.*

Second District—J. D. Brummall, Salisbury. Counties: Linn, Carroll, Chariton, Livingston, Grundy, Sullivan, Mercer, Putnam.

Third District—E. H. Miller, Liberty. Counties: Clay, Ray, Platte, Clinton, Caldwell, Gentry, Harrison, Worth, Daviess, *DeKalb,*

Fourth District—C. H. Wallace, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Fifth District—L. W. Dallas, Hunnewell. Counties: Macon, Shelby, Marion, Randolph, Monroe, Ralls.

Sixth District—Woodson Moss, Columbia. Counties: Audrain, Callaway, Montgomery, Warren, Pike, Boone, Howard, St. Charles.

Seventh District—W. B. Dorsett, St. Louis. Counties: St. Louis, Lincoln.

Eighth District—F. J. Lutz, St. Louis. Counties: Franklin.

Ninth District—B. M. Hypes, St. Louis. Counties: Jefferson, Washington, Reynolds, Iron, Perry, St. Genevieve, *St. Francois.*

Tenth District—J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrid, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.

Eleventh District—W. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, *Bollinger.*

Twelfth District—W. S. Allee, Olean. Counties: Miller, Morgan, Maries, Cole, Moniteau, Camden, Osage, Gasconade.

Thirteenth District—R. D. Haire, Clinton. Counties: Pettis, Lafayette, Henry, St. Clair, Benton, Saline, Cooper, *Hickory.*

Fourteenth District—M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Bates, Johnson.

Fifteenth District—A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Barton, Cedar, Vernon, *Dade.*

Sixteenth District—R. L. Johnson, Rolla. Counties: Crawford, Phelps, Pulaski, Laclede, *Dent, Dallas.*

Seventeenth District—J. E. Tefft, Springfield. Counties: Greene, Lawrence, *Christian, Stone, Barry, Webster, Polk, Taney.*

Eighteenth District—H. C. Shuttee, West Plaines. Counties: Howell, *Ozark, Oregon, Texas, Wright, Shannon, Douglas.*

*Counties in italic are unorganized.

HOUSE OF DELEGATES.

COUNTY.	DELEGATE.
Adair	A. E. Grim
Andrew	D. B. Bryant
Audrain	R. W. Berry
Bates	A. E. Lyle
Benton	S. O. Davis
Boone	A. R. McComas
Buchanan	T. H. Doyle
Butler	Ira W. Seybold
Caldwell	Tinsley Brown
Cape Girardeau	R. F. Wichterich
Carter-Shannon	P. D. Gun
Cass	J. S. Triplett
Cedar	Chas. A. Edgar
Chariton	J. H. P. Baker
Clinton	Robt. W. Rea
Cole	J. L. Thorpe
Cooper	R. L. Evans
Daviess	H. E. Songer
Franklin	Chas. F. Briegleb
Gasconade-Maries-Osage	W. E. Seba
Grundy	W. H. Winningham
Harrison	A. H. Vandivert
Henry	Wm. H. Gibbins
Holt	B. T. Quigley
Howard	C. O. Lewis
Howell	J. W. Bingham
Jackson	F. L. Cook
	N. P. Wood
	J. M. Frankenburger
	William J. Frick
	Herman E. Pearse
Jefferson	A. H. Hamel
Johnson	J. I. Anderson
Knox	Henry J. Jurgens
Laclede	J. A. McComb
Lafayette	C. T. Ryland
Lawrence	C. A. Moore
Lincoln	C. D. Avery
Linn	D. F. Howard
Livingston	Reuben Barney
Madison	S. C. Slaughter
Marion	Thos. Chowning
Miller	W. S. Allee
Mississippi	G. R. Wallace
Moniteau	W. R. Patterson
Morgan	A. J. Gunn
Newton	R. C. Lamson
Nodaway	E. L. Crowson
Pemiscot	M. D. Hendrix
Perry	J. W. Russell
Pettis	W. J. Ferguson
Phelps	S. L. Baysinger
Pike	T. Guy Hetherlin
Platte	Spence Redman
Putnam	J. A. Townsend
Ralls	T. J. Downing
Saline	J. E. Harris
Schuyler	W. F. Mitchell
Scotland	A. E. Platter
Shelby	Charles Chapman
Ste. Genevieve	G. M. Rutledge
St. Louis	Roy D. Moore
	P. Y. Tupper
St. Louis City	J. S. Myer
	J. C. Morfit
	W. W. Graves
	W. H. Stauffer
	M. B. Clopton
	C. A. Snodgras
	H. W. Soper
	F. L. Henderson
	John Green, Jr.
Stoddard	T. C. Allen
Vernon	J. Robert Buchanan
Washington	W. S. Smith
Worth	W. E. McKinley

NOTICE.

Medical and Surgical Section will be held at the Capitol Building.

Physicians in attendance will please register with the Registration Committee immediately upon their arrival.

It is necessary for the certificate to bear the signature of the Secretary and Joint Agent before it will be honored by the ticket agent for reduced return fare.

It is especially desired that the members be prompt in their attendance at all sessions, which will be called to order at the hour fixed on the Program.

All papers must be typewritten and should be handed to the Secretary of the Section as soon as read.

No paper will be allowed to occupy more than twenty minutes in its reading. Speakers designated to open discussion may speak seven minutes, general discussion five minutes, and ten minutes for closing the discussion by the essayists. No one may speak the second time on one subject without the unanimous consent of the members present.

PROGRAM.

TUESDAY, MAY FIFTEENTH.

House of Delegates called to order at 10:30 a. m.
Judicial Council called to order at 10:30 a. m.
Roll call and announcement of result.
Reading of minutes of previous meeting.
Reading of President's message and recommendations.
Report of Committee on Arrangements.
Report of Committee on Scientific Work.
Report of Commitee on Public Health and Legislation.
Report of Publication Committee.
Report of Treasurer.
Report of Secretary.
Election of Committee on Nomination.

REPORT OF COUNCILLORS.

1st District.....F. B. Miller, Kahoka
2nd District.....J. D. Brummall, Salisbury
3rd District.....E. H. Miller, Liberty
4th District.....C. H. Wallace, St. Joseph
5th District.....L. W. Dallas, Hunnewell
6th District.....Woodson Moss, Columbia
7th District.....W. B. Dorsett, St. Louis
8th District.....F. J. Lutz, St. Louis
9th District.....B. M. Hypes, St. Louis
10th District.....J. J. Norwine, Poplar Bluff
11th District.....W. D. Porterfield, Jr., Cape Girardeau
12th District.....W. S. Allee, Olean
13th District.....R. D. Haire, Clinton
14th District.....M. P. Overholser, Harrisonville
15th District.....A. R. Snyder, Joplin
16th District.....R. L. Johnson, Rolla
17th District.....J. E. Tefft, Springfield
18th District.....H. C. Shuttee, West Plains

MEDICAL SECTION.

SECOND DAY—WEDNESDAY, MAY 16TH.

MORNING SESSION, 9 O'CLOCK.

The Nervous System of the Child.....Scott P. Child, Kansas City
Discussion opened by Dr. C. R. Woodson, St. Joseph.
Ovarian Function.....Davis Forster, St. Louis
Discussion opened by R. H. Goodier, Hannibal.
The Use and Abuse of the Obstetrical Forceps...A. L. Gray, St. Joseph
Discussion opened by F. B. Hiller, Kahoka
Typhoid Fever.....E. P. Davis, Woodruff
Discussion opened by E. H. Miller, Liberty.
Illegal Practice of Medicine.....H. F. McGinnis, Higginsville
Discussion opened by H. C. Shuttee, West Plains.
Intestinal Auto-Intoxication.....J. B. Norman, California
Discussion opened by J. E. Thornton Columbia.
The Best Time to Give Quinine.....R. L. Johnson, Rolla
Discussion opened by G. Greenwood, Fredericktown.
Criminal Abortion; A Prevailing Evil Against the Unborn Generation; A National Crime Committed for Mere Social Promotion.
T. F. Lockwood, Butler
Discussion opened by C. H. Chastain, Weston.

MEDICAL SECTION.

SECOND DAY—WEDNESDAY, MAY 16TH

AFTERNOON SESSION, 1:30 P. M.

Malaria.....T. C. Allen, Bernie
Discussion opened by H. G. Wyer, Kirkwod
Broncho-Pneumonia.....T. O. Davis, Maitland
Discussion opened by Woodson Moss, Columbia.
The Present Status of Psychotheraphy. Dora Green-Wilson, Kansas City
Discussion opened by J. D. Brummall, Salisbury.
Cough.....J. C. Buckwalter, St. Louis
Discussion opened by W. E. Abrams, Kansas City.
Infantile Intussusception from the Country Practitioner's Standpoint.
J. D. Brummall, Salisbury
Discussion opened by John Zahorsky, St. Louis.
Mucous Colitis.....F. H. Matthews, Liberty
Discussion opened by O. H. P. Mills, Grant City.
Syphilis of the Nervous System.....C. J. Morrow, Kansas City
Discussion opened by Wm. W. Graves, St. Louis.
Ear-Tire as a Factor in Disease.....E. H. Mussen, Rockingham
Discussion opened by R. Barclay, St. Louis.

SECOND DAY—WEDNESDAY, MAY 16TH.

GENERAL SESSION 7:30 P. M.

ADDRESS OF PRESIDENT.....Dr. D. C. Gore, Marshall
ADDRESS IN MEDICINE.....Dr. W. G. Moore, St. Louis.
ADDRESS IN SURGERY.....Dr. C. H. Wallace, St. Joseph

MEDICAL SECTION.

THIRD DAY—THURSDAY, MAY 17TH.

MORNING SESSION, 9 O'CLOCK.

The White Plague.....H. Jarard, Pleasant Hill
Discussion opened by G. D. Allee, Lamar.
Albuminuretica.....C. O. Lewis, Fayette
Discussion opened by Kimball Hill, Eldorado Springs
Arteriosclerosis.....Tinsley Brown, Hamilton
Discussion opened by M. O. Biggs, Bowling Green
The Therapeutics of Eczema.....W. J. Frick, Kansas City
Discussion opened by S. M. Brown, Monroe City .
Missouri Sanatorium for the Treatment of Incipient Tuberculosis, and its Legal Foundation.....W. M. Bayliss, Mt. Vernon
Discussion opened by Wm. Porter, St. Louis.
Treatment of Adenoids by the General Practitioner
W. E. McKinley, Denver
Discussion opened by H. A. Booth, Pacific
Neurasthenia, Traumatic and Idiopathic; Its Pathology and Prognosis.....David S. Booth, St. Louis
Discussion opened by R. D. Ramey, Garden City.
Etiology and Cure of Hysteria.....E. F. Walter, Perry
Discussion opened by A. B. Freeman, Joplin
State Medicine.....C. M. Mitchell, Blythedale
Discussion opened by L. W. Dallas, Hunnewell,

MEDICAL SECTION

THIRD DAY—THURSDAY, MAY 17TH.

AFTERNOON SESSION, 1:30 P. M.

Etiology of Pneumonia.....C. A. Snodgras, St. Louis
Discussion opened by B. H. Zwart, Kansas City.
Histology of Pneumonia.....Frank J. Hall, Kansas City
Discussion opened by M. P. Overholser, Harrisonville.
Diagnosis of Pneumonia.....Robert T. Sloan, Kansas City
Discussion opened by W. E. Fischel, St. Louis.
Treatment of Pneumonia.....W. G. Moore, St. Louis
Discussion opened by E. W. Schauffler, Kansas City.
Gas Bacillus Infection; the Clinical Results of the Development in the Bacillus Aerogenes Capsulatus....Ernest E. Robinson, Kansas City
Discussion opened by J. R. Mudd, St. Charles.
The Importance of the Sigmoid Flexure in the Production of Enteroptosis, Pelvic Displacement and Reflex Phenomena.
J. M. Allen, Liberty
Discussion opened by D. B. Bryant, Savannah
The Treatment of Gastric Ulcer.....Franklin E. Murphy, Kansas City
Discussion opened by G. A. Greeson, Lincoln

SURGICAL SECTION.

SECOND DAY—WEDNESDAY, MAY 16TH.

MORNING SESSION, 9 O'CLOCK.

Ectopic Pregnancy.....O. B. Campbell, St. Joseph
Discussion opened by J. F. Cherrington, Chillicothe
Epithelioma of the Lip.....J. J. Claussen, Kanas City
Discussion opened by R. E. Schlueter, St. Louis.
Abdominal Injuries.....H. C. Dalton, St. Louis
Discussion opened by W. J. Frick, Kansas City.
Suprapubic Cystotomy as Preliminary to and as a Route for the Performance of a Considerable Number of Prostatectomies,
W. T. Elam, St. Joseph
Discussion opened by Bransford Lewis, St. Louis.
Spina Bifida.....J. D. Seba, Bland
Discussion opened by T. C. Boulware, Butler.
Some Remarks on the Treatment of Chronic Joint Disease
M. M. Edmondson, Kansas City
Discussion opened by Phil Hoffman, St. Louis
Surgical Aspects of Typhoid Fever.....C. G. Kirchner, St. Louis
Discussion opened by J. F. Binnie, Kansas City.
Suppuration of the Superior Maxillary Sinus with Involvement of Ethmoidel Cells and Sphenoidel Sinuses.....H. Jurgens, Edina
Discussion opened by H. W. Loeb, St. Louis.

SURGICAL SECTION.

SECOND DAY—WEDNESDAY, MAY 16TH.

AFTERNOON SESSION, 1:30 P. M.

An Unusual Retroperitoneal Tumor in the Mesocolon Simulating a Fibroid of the Uterus.....W. B. Dorsett, St. Louis
Discussion opened by C. G. Geiger, St. Joseph.
Pyuria.....E. G. Mark, Kansas City
Discussion opened by A. R. Snyder, Joplin.
Limitations of Surgical Procedures in Cancer...G. W. Broome, St. Louis
Discussion opened by C. Lester Hall, Kansas City.
The Limitations of Surgical Interference.Ernest von Quast, Kansas City
Discussion opened by H. Talbot, St. Louis.
Some Questions Concerning the Treatment of Uterine Fibromyomata,
H. S. Crossen, St. Louis
Discussion opened by H. C. Crowell, Kansas City.
The Treatment of Retroflexion of the Uterus.A. F. Hertzler, Kansas City
Discussion opened by Robert Funkhouser, St. Louis.
Some Recent Advances in Ophthalmology.....J. M. Ball, St. Louis
Discussion opened by B. E. Fryer, Kansas City.
Rectal Abscesses.....J. M. Frankenburger, Kansas City
Discussion opened by W. H. Stauffer, St. Louis.

SECOND DAY—WEDNESDAY, MAY 16TH.

GENERAL SESSION, 7:30 P. M.

ADDRESS OF PRESIDENT.....Dr. D. C. Gore, Marshall
ADDRESS IN MEDICINE.....Dr. W. G. Moore, St. Louis.
ADDRESS IN SURGERY.....Dr. C. H. Wallace, St. Joseph

SURGICAL SECTION.

THIRD DAY—THURSDAY, MAY 17TH.

MORNING SESSION, 9 O'CLOCK.

Non-Lithogenous Obstruction of the Biliary Ducts,
A. E. Cordier, Kansas City
Discussion opened by H. G. Mudd, St. Louis.
Lessons to be Drawn from Recent Operations on the Stomach.
W. Bartlett, St. Louis
Discussion opened by A. H. Cordier, Kansas City.
Appendicitis.....C. G. Geiger, St. Joseph
Discussion opened by W. H. Farrar, De Soto.
Why Some Appendectomies are Followed by Prolonged Abdominal Pain.....Francis Reder, St. Louis
Discussion opened by C. M. Barbee, Kansas City.
The Country Doctor and Appendicitis.....M. P. Shy, Knobnoster
Disucssion opened by J. J. Norwine, Poplar Bluff.
Surgical Problems in Spinal Trauma.....John C. Morfit, St. Louis
Discussion opened by R. McE. Schauffler, Kansas City.
Tuberculous Disease of the Joint.....T. E. Potter, St. Joseph
Discussion opened by H. Tuholske, St. Louis
The Importance of Post-Operative Treatment in Diseases of the Rectum.....W. H. Stauffer, St. Louis
Discussion opened by E. H. Thrailkill, Kansas City.

SURGICAL SECTION.

THIRD DAY—THURSDAY, MAY 17TH.

AFTERNOON SESSION, 1:30 P. M.

The Relative Value of the Surgical Procedure Employed for the Relief of Paralysis Following Acute Anterior Poliomyelitis,
Nathaniel Allison, St. Louis
Discussion opened by W. C. Overstreet, Sedalia
Surgery of the Liver.....St. Elmo Sanders, Kansas City
Discussion opened by Paul Y. Tupper, St. Louis.
Do We Cure Diffuse General Peritonitis...John Young Brown, St. Louis
Discussion opened by J. N. Jackson, Kansas City.
A Method of Radical Relief of Cases of Deafness Long Abandoned as Hopeless, Illustrated by Report from Actual Practice,
R. Barclay, St. Louis
Discussion opened by Theo. S. Blakesley, Kansas City.
A Method of Operating in Inguinal and Femoral Hernia When Complicated by Abscesses.....Herman E. Pearse, Kansas City
Discussion opened by F. J. Lutz, St. Louis
Ovarian Tumors, and Presentation of Specimen.
J. D. Porterfield, Jr., Cape Girardeau
Discussion opened by F. R. Anthony, Maryville.
Tuberculous Affections of the Rectum....E. H. Thrailkill, Kansas City
Discussion opened by Leon Straus, St. Louis.
Primary Tuberculosis of the Rectum with Report of Cases,
Leon Straus, St. Louis
Discussion opened by C. C. Leeper, Braymer.

COUNTY SOCIETY NOTES.

BUCHANAN COUNTY MEDICAL SOCIETY.

Buchanan County Medical Society met in regular session February 7th, Dr. O. B. Campbell, president, in the chair. Drs. J. W. Ferguson, E. L. Ballard and Wm. Wallis were elected to membership. Dr. S. D. Smith's transfer card from Atchison County Medical Society was received and accepted.

Dr. E. A. Donelan introduced a resolution to the effect that the Buchanan County Medical Society, through its secretary, write Senators Stone and Warner and Representative Fulkerson, urging them to use their influence in passing the Pure Food Bill.

Dr. W. L. Kenney presented a case of fibro-sarcoma of the orbit. The tumor had been removed nearly a year ago and the x-ray used following the operation. Up to date no recurrence had taken place. The pathological specimen was also exhibited.

Dr. Clarence Good read a paper on "The Treatment of Chronic Bright's Disease." The essayist was not in favor of the exclusive milk diet so often prescribed in these diseases. The great danger of the milk diet lay in its high protein percentage. Each litre of good cow's milk contains about 40g of protein. If milk is freely used as a diet, it causes the formation of 30-35g of urea and as urea is secreted with difficulty, it throws an extra amount of work on an already diseased organ. The essayist advised the use of milk in moderation with the addition of cream, cereals, legumes, eggs and even meat. In the treatment of chronic interstitial nephritis Dr. Good favored the restriction of fluids and was decidedly opposed to the "drinking cures" so often prescribed. In this class of nephritis the welfare depended upon the condition of the heart and arteries, and as the disease is usually accompanied by a high arterial tension, the inbibing of large quantities of water continuously could not be other than harmful. The occasional prescribing of the free drinking of water might be beneficial, yet it was by no means proven that the secretion of large quantities of urine increased the excretion of the solids of the urine.

Dr. Jacob Geiger read a paper on "The Surgical Treatment of Chronic Bright's Disease." Dr. Geiger stated that he had had no personal experience with the surgical treatment of chronic kidney disease, but that he believed it a rational treatment in certain desperate cases as a means of prolonging life, and that while the ultimate results were not yet known, that the surgical treatment certainly did cause a marked temporary improvement in some cases.

These papers elicited a free discussion which was participated in by Drs. Elam, Leonard, Chas. Geiger, Scott and O. B. Campbell.

BUTLER COUNTY MEDICAL SOCIETY.

At the meeting held at Poplar Bluff on January 26th, the roll of

membership was called as follows: Drs. B. C. Jones, Dewitt Eskew, I. W. Seybold, J. M. P. Smith, A. W. Davidson, A. Windsor, W. A. Kendall, J. J. Norwine, J. W. Mott, W. F. S. Taylor, Victor Cadwell, C. W. Williamson, C. O. Wright. Present, Drs. Seybold, Smith, Kendall, Norwine, Mott, and C. O. Wright. The minutes of the meeting of December 29th, 1905, were read and approved. The newly elected officers for 1906 were installed. Note was taken of the incorporation in the minutes of the resolutions relative to patent medicines, impure food and advertising thereof. Dr. W. A. Kendall was elected reporter for the ensuing year.

MEETING OF FEBRUARY 23RD.

Present, Drs. J. J. Norwine, president; I. W. Seybold, secretary; Eskew, Jones, Kendall, Mott and Smith. The minutes of the last meeting were read and approved.

Dr. Mott reported a case illustrating two points in practice. A man seriously injured in his remaining eye and contrary to advice, self-willed, worked until threatened with blindness. The later diagnosis and advice was confirmed by three city specialists of high standing, but another doctor assumed to operate early and total blindness followed.

Dr. Norwine reported a case of mild diphtheria (decided by the microscope) in which antitoxin saved the patient, and the other children of the family were saved by prophylactic use of iodine, mercury bichloride and ferri chloridi. Dr. Mott related a similar experience but added potassium chloride to the treatment. Dr. Seybold agreed with the other speakers and mentioned the use of quick-lime slacked in a vessel placed under a blanket, the fumes being inhaled by patients. There was uniformity of belief in the beneficence of antitoxin and of the applications of various preparations containing chlorine for prophylaxis. Mention was made that diphtheritic conditions are milder in some localities than in others.

Dr. Jones called attention to the tendency of many persons to resort to pretentious methods of restoring health and to the confidence manifested in the claims of some new operators. The question arose whether physicians are not in some degree responsible for this tendency on the part of credulous people; the wonderful developments of remedial science needed to be impressed upon the people more than had been done.

W. A. KENDALL, Reporter.

CHARITON COUNTY MEDICAL SOCIETY.

Chariton County Medical Society met in Dr. Welch's office in Salisbury, February 22nd, at 8:30 p. m., Vice President McEwen in the chair. Owing to the extremely bad condition of the roads, the attendance was small. Dr. J. D. Brummall, chairman of committee on year book, reports the book will be ready in a few days. Dr. Welch moved that the dues of Dr. C. A. Jennings, secretary and treasurer, be remitted for the year 1906; motion carried. The consideration of a motion made by Dr. McEwen in regard to the strong position taken by *Collier's Weekly* and the *Ladies' Home Journal*, against the indiscriminate sale

of patent medicines, etc., was postponed until the next meeting. Dr. J. D. Brummall reported some interesting cases.

On motion the society adjourned to meet in Salisbury on Thursday, the 29th of March, at 8:30 p. m.

W. L. Baker Reporter.

CLINTON COUNTY MEDICAL SOCIETY.

The Clinton County Medical Society met in Plattsburg, March 6th, with a fair attendance of members. The meeting was called to order by the president. Minutes of last meeting were read and approved.

Owing to absence of the essayists there were no papers read at this meeting. Dr. John Sturgis presented a clinic, the case being one of chronic catarrhal gastritis, which was treated by lavage with Turk's tube and followed by massage with vaporized compressed air.

The next meeting will be held in Plattsburg, April 3rd.

E. A. Colley, M. D., Sec.

DAVIESS COUNTY MEDICAL SOCIETY.

Daviess County Medical Society met at Gallatin on February 27th, with the vice president, Dr. W. L. Brosius, in the chair. The scientific program of the meeting consisted of reports of interesting cases by the following members: Drs. Pitkin, Hanna, Doolin, Smith, Waller, Wetzel, Clagett and Songer. Much interest was manifested in these reports.

The following officers were elected for the ensuing year: President, W. L. Brosius; first vice president, N. M. Wetzel; second vice president, L. R. Doolin; secretary and treasurer, M. A. Smith; reporter, H. E. Songer; delegate, H. E. Songer; alternate N. M. Wetzel.

The next meeting of the society will be held on the first Tuesday in May.

H. E. Songer, Reporter.

HENRY COUNTY MEDICAL SOCIETY.

Henry County Medical Society met in regular session Wednesday, March 14, 1906, Dr. Wm. H. Benway, president, in the chair. Minutes of the previous meeting were read and approved. Present: Drs. Benway, Wm. M. Shankland, Wm. H. Gibbins, R. D. Haire, F. M. Douglass, J. M. Miller, R. B. Fewell, W. C. Tanner, A. E. Derwent and J. E. Kunkler.

Dr. Shankland reported a case of stab wound of the neck, left side, just behind the angle of the jaw and below the ear, penetrating one and a half inches. The boy ran to the house and could be tracked easily by the blood. He reached the house, called for help and fell in a faint. Inmates took him in, placed him on a bed, on his right side, and put soot, spider web and flour on the wound to stop flow. I was called and arrived at the house in about one and a half hours. Flow of blood had ceased. Cleansed the wound and probed to its depth; no return of the hemorrhage nor has there been since; wound has healed. While still lying on the right side, he became comatose. Coma began leaving him in ten hours, but there was paralysis of the right side below the neck and of the left side of face, and complete aphony. This aphony and

paralysis began to recede in about ten days. Now, two months after the injury, he can talk intelligently, read and write, and the gait is not halting nor is there any dragging on the right side. No previous fall before he fainted from loss of blood. Now what was the cause of the coma and why should it pass away so soon while the paralysis has been present so long? Clot was excluded and I think it may be a thrombus. Discussion of the case did not elucidate the matter, some contending for a clot, others for a thrombus or a jar of the middle meningeal.

Dr. Gibbins spoke about the dues of the county society being burdensome upon a great many of the members and thought that fifty cents annual dues were enough. That might be an incentive for many to come in and retain their membership.

The board of censors reported favorably upon the application of Dr. A. E. Derwent, of Clinton, for membership, and upon a vote he was declared a member.

Dr. J. E. Kunkler comes as a member from the McLane County, (Illinois) Medical Society, and paid his dues to the state and county societies.

A motion prevailed that the members of the board of censors arrange for a banquet at the next regular meeting in June.

R. D. Haire, M. D., Secretary.

JASPER COUNTY MEDICAL SOCIETY.

MEETING OF FEBRUARY 5TH.

Jasper County Medical Society met in regular session in the parlors of the Y. M. C. A. building at Joplin at 8:30 p. m., Dr. Pifer presiding. The following members were present: Drs. Pifer, Matthews, Kelso, Shelton, Kincheloe, Neff, Grantham, Lanyon, Bachelder and James. Visitors, Drs. Haas, Blockerley, F. W. Bailey, Taylor, Blackwell of Joplin and Ketcham and Wolfe of Carthage. Minutes of the previous meeting were read and approved.

Dr. Shelton read a paper on "Albuminuric Retinitis" which was freely discussed by all the members present. Dr. Matthews reported the case of a pregnant woman who suffered greatly from impairment of vision. Abortion was induced which resulted in restoring vision and the patient is now alive and apparently well. Dr. Grantham discussed the "Treatment of Bright's Disease by Decapsulation of the Kidneys." He believes the results will warrant this procedure.

In the discussion of these papers, Dr. Shelton stated that all true cases of albuminuric retinitis as a rule succumb within a year to the attack.

Dr. Grantham reported three cases of ectopic gestation on which he had operated.

The following applications for membership were read and referred to the committee for report: Drs. J. D. Newman, Joplin; R. Hill, Joplin; C. M. Ketcham, Carthage; S. D. Meredith, W. E. Steele and B. F. Wolfe, Carthage.

Dr. Bachelder, of Asbury, will read a paper at the next meeting on "Practical Laboratory Work.

MEETING OF FEBRUARY 19TH.

The regular session of Jasper County Medical Society was held in the parlors of the Y. M. C. A. at 8:30, Dr. J. D. Pifer in the chair. Members present: Drs. Pifer, Miller, Neff, Kelso, Shelton, Clark, Bachelder, Matthews and James. Visitors, Drs. Haas and Killian of Joplin. Minutes of the last meeting were read and approved. The application for membership of the following names were reported upon favorably by the board of censors: Drs. C. M. Ketcham, J. D. Newman, D. R. Hill, S. D. Meredith, W. E. Steele, B. F. Wolfe. On motion the rules were suspended and the society cast a vote of approval and the applicants were declared elected to membership.

The application for membership of Dr. H. R. Haas was referred to the committee for approval.

The treasurer read his report for the year 1904 and 1905. This report shows a balance in the treasury of $19.55. On motion the report was accepted.

On motion it was decided to invite the Cherokee Society of Kansas to attend our first meeting in April.

The scientific program consisted of a paper by Dr. F. S. Bachelder on "Practical Laboratory Work." This was a splendid essay to which the society listened with much pleasure and profit. After all business had been dispensed with, the members were invited to the Hotel Clarendon and enjoyed a splendid dinner prepared for their entertainment by Dr. R. S. Kelso.

R. M. JAMES, Secretary.

JACKSON COUNTY MEDICAL SOCIETY.

MEETING OF FEBUARY 20, 1906.

The Jackson County Medical Society held its regular weekly meeting in the rooms of the Kansas City Athenaeum, February 20, 1906, the president, Dr. E. H. Thrailkill, in the chair. Sixty-three members were in attendance at this meeting.

The following were elected to membership: Drs. H. D. Hamilton, A. L. Hearst, J. W. Green, of Independence, and R. L. St Clair.

The scientific program consisted of a paper and two case reports. Dr. J. H. Thompson read a paper entitled "The Significance of Intra-Ocular Hemorrhages." This paper was of special interest and value to the general practitioner. Dr. C. F. Roberts reported a case of the "Removal of a Foreign Body from the Male Bladder." The foreign body was a rubber catheter which had been introduced by the patient, an old man, and which had broken at the posterior urethra when he attempted to remove it. The portion of catheter was removed by the perineal route. Dr. B. C. Hyde reported a case of "Septic Endocarditis," and presented the heart illustrating in a striking manner the malignant, destructive type of the disease. The discussions were opened in succession by Drs. B. E. Fryer, E. E. Hubbard and E. L. Stewart (in the absence of Dr. R. T. Sloan) and the following took part in the general discussion: Drs. G. W. Grove, Joseph Lichtenberg, Franklin E. Murphy, W. H. Coffey, J. Q. Chambers, H. O. Hanawalt, Frank J. Hall, J. M. Langsdale, John Wil-

son, E. E. Hubbard, O. H. Leonard, C. B. Hardin and J. W. Kimberlin taking part. Drs. Thompson, Roberts and Hyde closed the discussion.

MEETING OF FEBURARY 27, 1906.

The regular weekly meeting of February 27, 1906, was called to order by the vice president, Dr. O. H. Dove. Sixty-six were present at this meeting.

Dr. J. H. Ralston was elected to membership.

The scientific program consisted of a Symposium on Cancer of the Breast. The first topic was "The Etiology and Pathology" by Dr. J. J. Clausen, who exhibited histologic specimens; the next topic was entitled "The Technic of Operation for Cancer of the Breast" by Dr. H. C. Crowell; and the last topic, "Treatment by the X-Rays," by Dr. J. N. Scott.

Dr. C. M. Fulton opened the discussion on Dr. Clausen's paper, Dr. W. J. Frick on Dr. Crowell's paper, and Dr. Maggie L. McCrea, in the absence of Dr. C. L. Spaulding, opened the discussion on Dr. Scott's paper. The following participated in the general discussion which was opened by Dr. J. N. Jackson: Drs. Jacob Block, A. E. Hertzler, E. F. Robinson, A. H. Cordier, R. M. Schauffler, J. M. Langsdale, Frank Hall, and C. F. Roberts. The discussion was closed by the respective essayists.

MEETING OF MARCH 6, 1906.

The regular weekly meeting convened in the Athenaeum Club rooms on March 6, 1906, the president, Dr. E. H. Thrailkill, in the chair. Thirty-five members were in attendance at this meeting.

Owing to the illness of Dr. Jabez N. Jackson, and the absence of Dr. Jacob Block, the scientific program was, upon motion of the secretary, postponed until the next regular meeting, Dr. E. G. Mark consenting to read his paper at that time.

In place of the scientific program scheduled for the evening case reports were called for by the president and the following responded: Dr. E. G. Mark, with a case of "Mycosis of the Seminal Vesicles," and one of "Senile Hypertrophy of the Prostate;" Dr. J. W. Kyger, with a case of "Perforative Cholecytitis;" Dr. R. E. Sastelaw, a case of "Syphilis" in which there were two separate infections; Dr. A. E. Hertzler, a case of "Malignant Cystoma of the Ovary;" Dr. C. F. Roberts, a case of "Perforation of the Abdominal Wall by the Gradual Outgrowth of a Slender Spicula of Bone;" and Dr. C. Lester Hall, a case of "Encysted Vesical Calculus." These reports were discussed by Drs. Frank J. Hall, Howard Hill, E. G. Mark, H. C. Crowell, F. H. Brunig, C. M. Fulton and C. Lester Hall.

MEETING OF MARCH 13, 1906.

The regular weekly meeting of the society was held on Tuesday evening, March 13, 1906, the president, Dr. E. H. Thrailkill, in the chair. Forty-five were in attendance at this meeting.

The amendment to the Constitution and By-laws of the Jackson County Medical Society providing for the election of an executive committee introduced by Dr. C. B. Hardin at the meeting of February 6th, was adopted by the vote of the so-

corporations practicing medicine

ciety.

The scientific program consisted of a "Symposium on Renal Surgery." Dr. E. G. Mark's topic was "Ureteral Catheterization as a Diagnostic and Therapeutic Measure;" Dr. Jacob Block's "The Diagnosis of Conditions Calling for Nephrotomy and Nephrectomy;" Jabez N. Jackson's, "The Technic of Renal Operations." The following took part in the gereral discussion: Drs.J. E. Binnie, C. Lester Hall, A. H. Cordier, H. C. Crowell, Howard Hill, C. M. Fulton, A. E. Hertzler and F. H. Brunig. Drs. Block, Mark and Jackson closed the discussion.

MAX GOLDMAN, M. D., Secretary,

ST. LOUIS MEDICAL SOCIETY

MEETING OF FEBRUARY 24, 1906.

After reading of minutes of previous meeting, and the monthly reports of the various standing committees, Dr. L. C. McElwee, a member of the board of commissioners of the Missouri State Sanatorium for the Treatment of Incipient Pulmonary Tuberculosis, read a paper relative to this subject; he first gave a history of the origin and progress of the sanatorium idea in the treatment of pulmonary tuberculosis, also a description of several institutions of this kind which the commissioners had visited, and showed the plans for the proposed Missouri institution which will be located at Mt. Vernon, Mo., and for which the state has appropriated $375,000, but only a small part of this is available at present. It is claimed that 70 per cent. of incipient cases are cured in these institutions, in from two months to two years' treatment. Certainly the state could not spend money in any other way which would bring such large returns in saving of life and increasing the earning capacity of this large class of individuals. Statistics show that 1 in 10 of the population die of pulmonary tuberculosis; that means 300,000 of Missouri's 3,000,000 will be carried off by the "Great White Plague." If 70 per cent. of these could be cured by the sanatorium treatment, what an immense amount of good could be accomplished along this line. Discussion by Drs. Porter, Homan, Bliss, Stewart, Snodgras and Behrens.

A vote of thanks was extended Dr. McElwee.

Dr. Guthrie McConnell read a paper entitled "A Review of Cancer in the United States, According to the Twelfth Census." Discussion of the paper was postponed until next meeting owing to the lateness of the hour.

A pathological specimen of a very large aneurism of the hepatic artery was presented by Dr. Barnes and a clinical history of the case given by Dr. Evans.

Average attendance for the month, 73; elected to membership during the month, 23.

MEETING OF MARCH 3RD.

The committee on public health and legislation reported the progress made in the prosecution of advertising quacks and newspapers publishing such obscene advertisements and recommended that a committee be appointed to raise funds to enable them to begin prosecution of in- and surgery unlawfully. The report of the committee was adopted and a committee appointed to raise

funds as requested.

The following were elected to membership: G. S. Beckham, 5110 Page Boulevard; L. P. Butler, Maryland and Euclid Avenues; Joseph A. Hardy, 7620 S. Broadway; Frank Hinchey, 1107 N. Grand Avenue; M. L. Klinefelter, 536 N. Taylor Avenue; L. J. Oatman, 4217 Olive Street; Frederick P. Parker, 1423 Euclid Avenue; D. R. Parman, Linmar Building; Otto Reinders, 2107 S. Eleventh Street; A. G. Wichman, 1624 S. Jefferson Avenue.

The society spent a very profitable evening in the consideration of that most fatal of all acute diseases, pneumonia, the mortality rate of which, in spite of our increased knowledge, continues to advance.

The program was in the form of a symposium with papers by Dr. J. R. Lemen, on Symptomatology, Dr. L. M. Warfield on Pathology, and Dr. W. G. Moore on Treatment. The papers were all first class and elicited a very thorough discussion, participated in by a number of the members. The principal remedies discussed were strychnine, digitalis, strophanthus, nitro-glycerine veratrim, vivide, creosote carbonate, quinine and alcohol; particular stress was placed on feeding, plenty of fresh air and sunlight.

The following resolutions were adopted:

Whereas, The St. Louis Medical Society has consistently and energetically supported the move in favor of a State institution for the care of persons in the early stages of tuberculosis, and legislation to this end with an appropriation of funds, was secured last year; and

Whereas, the economical construction of the buildings and effective maintenance of the State sanatorium for tuberculous persons is a matter of the first importance to the people of Missouri; and

Whereas, it is important that the money already appropriated shall be well and judiciously expended in order that by such showing this society may be enabled to consistently ask the next General Assembly for further appropriations for building and maintenance; and

Whereas, grave doubts have arisen that the plans as proposed and presented by the Board of Commissioners for the said institution are not likely to be effective and economical; and

Whereas, this society, to whose efforts the present law is largely due, desires the best results and also desires to aid the Board of Commissioners in every way, therefore be it

Resolved That the said Board of Commissioners be and are hereby respectfully requested to confer and advise further before a final decision thereon is reached, and that the plans as aforesaid be held in abeyance awaiting the outcome of such further consideration and deliberations.

MEETING OF MARCH 10TH.

The scientific program as prepared by the executive committee consisted of two papers, one by Dr. F. J. Lutz, "A Plea for the Early Establishment of Collateral Circulation in Hepatic Cirrosis." Dr. Lutz being unable to attend this paper was laid over until some future meeting.

The second paper, "Menstruation from the Cervix," by Dr. T. C. Witherspoon, was of great interest, because of the scarcity of literature

on the subject. The doctor reported two cases—the uterus and tubes having been removed in both instances by a supra-vaginal amputation, the ovaries being left; both cases continue to menstruate regularly from the remaining cervix. The only difference between the menstruation before and since the operation is, that now it only lasts. in one case from 24 to 36 hours and in the other from 36 to 48 hours, instead of from 3 to 4 days as formerly. Discussed by Drs. Ehrnfest, Gellhorn, Dorsett, Forster, Murphy, Fisch and Taussig. Attendance 90.

MEETING OF MARCH 17.

A communication from the secretary of the board of commissioners of the Missouri State Sanatorium for Incipient Pulmonary Tuberculosis was read, asking that a committee from the St. Louis Medical Society be appointed to confer with the board of commissioners in accordance with the resolutions adopted by the society, at the meeting of March 3rd. The motion, that such a committee be appointed, carried.

The symposium on Sinus Diseases, "Etiology," by Dr. F. C. Ewing. The doctor considered, among other causes, extention of inflammation from continuity and contiguity of tissue, bacterial infection, lodgement within the sinuses of foreign bodies, trauma, syphilis, tuberculosis, new growths and decayed teeth.

"Diagnosis"—by Dr. G. Sluder. He spoke of pain, its peculiar character and location, purulent discharge, and tenderness on pressure over the region of sinuses.

"Treatment"—by Dr. M. A. Goldstein. The doctor described the different operative methods used to secure drainage, washing out and curettement.

"Ocular Signs and Complications"—by Dr. John Green, Jr. Dr. Green spoke of the inflammation of the orbit, exophthalmus, inflammation of the optic nerve, paralysis, either partial or complete, of one or more extra-ocular muscles, edema of the lids, etc.

Discussion by Drs. Shields, James, Jennings, Buckwalter, Funkhouser, Henderson, Saner, and Shattinger.

The following delegates to the Missouri State Medical Association were elected: Drs. P. Y. Tupper, J. S. Meyer, J. C. Morfit, W. W. Graves, W. H. Stauffer, W. B. Dorsett, C. A. Snodgras, F. L. Henderson, H. W. Soper, John Green, Jr.

I. E. GRAHAM, Reporter.

JOHNSON COUNTY MEDICAL SOCIETY.

Johnson County Medical Society met in Warrensburg, March 13th. Regular business of the society was transacted as usual. The society voted to have the annual banquet on or about the date of the next regular meeting, June 12th, and committees were appointed to prepare for the same.

Resolutions were adopted to be presented to the state board of health, commending the character of our brother physicians, Drs. Shy and Raine, of Knobnoster.

The scientific program consisted of a paper on the "Treatment of Pneumonia," by Z. Case, of War-

rensburg. In this paper the essayist gave his experience of thirty years in that line. It was an excellent review of the subject. The discussion brought out quite a variety of opinions among the members as to the efficiency and safety of the ice bag and cold bath in controlling the severe symptoms of the disease.

E. H. GILBERT, Secretary.

LAWRENCE COUNTY MEDICAL SOCIETY.

Lawrence County Medical Society met in regular session at Aurora on March 6th, the president, Dr. Harris, in the chair. There was a good attendance of members and a number of visitors from Barry, Stone, Christian and Greene counties.

The following names were presented as applicants for membership: Drs. J. H. Craven, J. P. Baird, and T. D. S. McCall of Marionville; W. S. Burney, of Miller; D. M. Huffman and E. E. Goodrich, of Crane, and D. L. Mitchell, of Cassville.

This meeting was a very interesting one throughout, the papers read being of excellent character and the discussion earnest and animated.

The following were appointed a committee on public health and legislation: Drs. W. W. Rodman, Pierce City; D. L. Mitchell, Cassville, and D. M. Huffman, Crane.

Dr. C. A. Moore was elected delegate to the state meeting and Dr. I. A. Cottingham alternate.

The next meeting will be held at Aurora on June 5th.

C. A. MOORE, Secretary.

MISSISSIPPI COUNTY MEDICAL SOCIETY.

The Mississippi County Medical Society met in regular session, Monday, March 12, 1906, at the office of Dr. A. W. Chapman, with its president, Dr. G. R. Wallace of Bertrand, in the chair. Members present: Drs. A. W. Chapman, W. P. Howle, M. D. Hamner, R. K. Ogilvie and G. R. Wallace.

The officers for the ensuing year are as follows:

President, G. R. Wallace, Bertrand; vice president, A. W. Chapman, Charleston; secretary, R. K. Ogilvie, Charleston; treasurer, J. M. Rowe, Charleston; board of censors, J. M. Rowe, M. D. Hamner and A. J. Martin.

Dr. G. R. Wallace, of Bertrand, was elected delegate to the State meeting at Jefferson City and R. K. Ogilvie as alternate.

Drs. J. S. Davis, Whiting and Albert Willis of Birds Point were elected members.

Resolutions of respect were adopted on the death of Dr. C. A. Story, of East Prairie.

A motion was made and seconded to amend the by-laws regarding the time and meeting place of the society was laid over until next meeting. The object of this amendment is to hold the meetings monthly, instead of quarterly, and to meet in Charleston, East Prairie and Bertrand on successive months.

Resolutions were adopted endorsing the American Medical Association and the different journals on their stand regarding the patent medicine evil, and the secretary was

instructed to request the representative of Mississippi county to draft a suitable bill and introduce the same into the state legislature prohibiting the indiscriminate sale of the many quack consumption and cancer cures, etc., now menacing public health. Each member present pledged his support and influence in having such a bill passed.

The secretary sent invitations to all non-members of the society to join the local organization. In time we hope to offer enough inducements for all non-members to lay aside personal considerations and join in advancing the interests of the profession.

Among the interesting cases reported, Drs. Howle, Wallace and Ogilvie reported cases of La Grippe, Hysteria and Cysto-Pyelitis, respectively, which were freely discussed by the members.

Dr. Wallace, the new president, has the "McCormick spirit and push" and a year of good meetings and increased interest is looked for.

R. K. Ogilvie, M. D., Sec.

PLATTE COUNTY MEDICAL SOCIETY.

The regular meeting of the Platte County Medical Society was held in Platte City, Wednesday, March 7th, Dr. A. C. Barr, the vice president, presiding. The following members were present: Drs. Barr, Patterson, Davis, Redman, Clark, and Coffey. The minutes of the previous meeting were read and approved. Dr. Spence Redman reported a very interesting case of myalgia in a young man eighteen years of age. This brought forth a liberal discussion from several members. Dr. A. C. Barr reported a case of embolism of the brain in a man 76 years old. This case also was freely discussed and commented upon. A general discussion upon "Percussion and Auscultation of the Chest" and "Antipyetics" then followed which proved highly instructive.

The plans of the society for this year are to have a post-graduate course upon subjects instructive to all.

The program for the month of April will be "Diagnosis of Valvular Lesions of the Heart" and "Antirheumatics."

These meetings are becoming more and more interesting, and every physician in the county is urged to attend.

The next meeting will be held in Platte City on the first Wednesday in April.

G. C. Coffey, M. D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

MEETING OF FEBRUARY 14.

The Ste. Genevieve County Medical Society held its regular monthly meeting on February 14th, the president, Dr. Moore, in the chair. The minutes of the last meeting were read and approved. Members present: Drs Moore, Hinch, Rutledge, Morgansteen and Lanning.

Dr. Moore reported a case of subpleural abscess which presented many difficulties in arriving at a positive diagnosis. The patient, an adult male, had pneumonia of right lung, the crisis apparently normal,

but in a couple of days the temperature returned and varied for ten days. A pleural exudate had formed which on aspiration showed seropurulent matter. Several days later aspiration was again performed and fluid of the same nature withdrawn. Paracentesis was then done in the anterior axillary line with subsequent drainage. The patient improved somewhat but not continuing to do so, it became necessary to resect a portion of the sixth rib to secure better drainage. Improvement again took place and the pleural cavity had almost healed when recrudescence of fever and loss of strength and flesh, gave the case an unfavorable turn. Auscultation revealed absence of respiratory murmur and percussion showed dullness of the lung in the vicinity of the resected opening and it was concluded that pus must still be there. About this time the patient had a spell of coughing and brought up large quantities of pus, convincing the doctor that there was an abscess in the right lung and that it must be located beneath the site of the resected opening. With an aspirating needle the abscess was located through the opening made previously into the pleural cavity, a grooved director was passed along the needle and a long slender bistoury carried on this to the abscess cavity, when pus gushed forth. A drainage tube was inserted and parts dressed. From this time the patient made a rapid and uneventful recovery. The doctor's opinion was that the abscess of the right lung developed subsequently to the pneumonia and was prior in origin to the empyema; that the empyema developed secondarily to the abscess of the lung by metastisis.

Dr. Hinch's paper on "Lodge and Contract Practice" was timely and impressed the members that the only way of correcting the evil was for the profession to organize and work as a unit, and that it was up to them to get in line and correct the practice, just starting in our midst, in its inception.

Reports of committees were heard. Committee on fee-bill was instructed to revise the same for the next meeting. The secretary was instructed to notify all members to be present at the next meeting to consider a resolution to be offered on "Lodge Practice" and also matters of professional business interest. No objections being offered, the hour of meeting was changed to 8:30 a. m. on the second Wednesday of each month, thus giving all members a better opportunity to be present.

MEETING OF MARCH 14.

The Ste. Genevieve County Medical Society held its regular monthly meeting on Wednesday, March 14th, the president, Dr. Moore, in the chair. Members present: Drs. Wilkins, Hinch, Morgansteen, Moore, Hertich, Rutledge, Jarvis and Lanning. Minutes of the last meeting were read and approved.

Dr. Morgansteen read an extract from an address to the Civic Club of Philadelphia, Pa., on "Nostrum Evil Laid at the Door of Physicians." Afterwards he read a paper on "Quackery" as applied to boastful individual pretensions and the advertising of nostrums to the laity in the cure of diseases.

The following preamble and reso-

lution on lodge contract practice was read:

"Whereas, it having come to our knowledge that it has become a custom among many of the fraternal organizations and societies to contract with a physician or physicians usually members of their orders or societies, to obligate themselves as physicians to attend the sick members thereof, under contract, at a price regulated and determined by the society or order, such price or remuneration being much less than that charged for similar services in the same community, thereby debasing and degrading our noble professions, therefore, be it

Resolved: That the Ste. Genevieve County Medical Society condemn such contract practice and that its members hereby agree and declare that they will not enter into such a contract with any lodge, society or association under any circumstances whatever, except to act as examiners for candidates for membership thereof."

On motion, duly seconded, the resolution was unanimously adopted as read.

The application of Dr. J. M. Shirley for membership was received and laid over for action at the next meeting. The society having a fee bill to consider (which was later adopted) and no further business appearing, adjournment was taken until the second Wednesday in April at 8:30 a. m.

R. W. Lanning, Secretary.

STODDARD COUNTY MEDICAL SOCIETY.

Stoddard County Medical Society held its regular bi-monthly session at Bloomfield, on Wednesday, March 2nd, at 1 p. m. In addition to the usual routine business, a voluminous report was made by the committee on public health and legislation concerning violations of the Medical Practice Act in this county. The report, which showed careful and thorough investigation on the part of the committee, was received and the secretary was instructed to inform the prosecuting attorney that the society believes enough evidence has been furnished the committee to justify prosecution.

Dr. T. C. Allen read a paper on "Malarial Infection of the Fœtus in Utero," with report of a case. A general discussion followed which was very interesting.

Dr. H. S. Winters, presented a case for diagnosis. After discussion, Dr. Corbin was asked to take an x-ray photo of the limb and report at the next meeting. The scientific program at the next meeting will consist entirely of a quiz on the anatomy, physiology and pathology of the abdominal viscera.

The next meeting will be held in Puxico, May 9th.

John Ashley, M. D., Sec.

BOOK REVIEWS.

History of Medicine, with the Code of Medical Ethics. By Nathan Smith Davis, A. M., M. D., LL. D., Emeritus Dean and Professor of Medicine, Northwestern University Medical School, Chicago. Cleveland Press, Chicago.

From 1892 to 1897 the author gave to the senior class of the Northwestern University Medical College each year a course of lectures on the history of medicine from the earliest periods of which we have any record to the present time. The origin and progressive development of the various branches of medical science and practice and their intimate connection with the progress of all other departments of human knowledge are traced with clearness and accuracy. This volume has been written from notes used in the lecture room. The author consented to the publication of these notes in the hope that they might attract the attention of both students and practitioners of medicine and thereby diffuse a better knowledge of the origin, progress, and present status of the true science and art of Medicine.

The Signs of Internal Diseases, With a Brief Consideration of the Principles thereof. By Pearce Kintzing, B. Sc., M. D., Professor of Physical Diagnosis and Diseases of the Heart, Maryland Medical College. Illustrated. Cleveland Press, Chicago, 1906.

This volume is the practical result of the class room first intended for the author's own students, it has gradually been elaborated to its present commendable proportions. While the subject matter is old, yet it is presented in a new, attractive, and original manner which makes it a work of real worth. Technicalities are avoided and the simple way always used when it sufficed. In this way the book is one of genuine value to the student in physical diagnosis.

The Diseases of Infancy and Childhood. By L. Emmett Holt, M. D., Sc. D., LL. D. Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York. With two hundred and forty-one illustrations including eight colored plates. Third edition, revised and enlarged. New York and London. D. Appleton and Company, 1906.

The rapid progress which is being made in medicine, especially in pediatrics, renders frequent revision necessary if the author would present to his readers existing knowledge in his department of medicine. In this revision the needs of the student and practitioner rather than the specialist have been considered. The purpose has been to restrict the volume to its own particular field omitting much which is fully treated in works upon pathology, general medicine and surgery. Therefore certain chapters have been abridged while others have been expanded. Especial pains have been taken with the illus-

trations which are of great value in both clinical and pathological conditions. Many of the old ones have been replaced by better ones, and twenty-five new illustrations have been introduced. While every chapter has been rewritten, and some appearing for the first time in this edition, the principle changes have been made in the following articles: Examination of the Sick Child, Hypertrophic Stenosis of the Pylorus, Diarrheal Diseases and Dysentery, Vaginitis, Cerebro-Spinal Meningitis, Mental Defects, Chondro-Dystrophy, Status Lymphaticus, and Diphtheria.

This volume supplies the every day need of the physician who practices among children and as such should be the daily companion of him who is preparing himself as a specialist in pediatrics.

International Clinics, Edited by A. O. J. Kelly, A. M., M. D., Vol. IV. Fifteenth Series. 1906. Philadelphia and London. J. B. Lippincott Company.

The latest volume of this most excellent publication contains twenty-five articles by the best clinicians in this country and Europe. The branches receiving attention are Treatment, Medicine, Surgery, Obstetrics and Gynecology, Ophthalmology, and Pathology. Among the papers are: The Treatment of Psoriasis, by William S. Gottheil, M. D. The Treatment of Some Common Gastric Disorders, by Norman B. Gwyn, M. D. Empyema, with a report of thirty cases, by J. N. Hall, M. D. The Later Stages of Cirrhosis of the Liver, by Sir Dyce Duckworth, M. D., LL. D. The results of operations, such as Gastroenterostomy, Pyloroplasty, etc., in the treatment of diseases of the stomach, by John B. Deaver, M. D. Phlebitis, Thrombosis, and Embolism Following Abdominal and Pelvic Operations, by William A. Edwards, M. D. The Study of the Clinical course of Joint Tuberculosis by means of the X-Rays, by Albert T. Freiberg, M. D. The Etiology and early Diagnosis of Acute Peritonitis, with the report of Illustrative Cases, by Benjamin T. Tilton, M. D. The Diagnosis of Surgical Diseases of the Kidney, by J. Garland Sherrill, A. M., M. D. A Study of Ectopic Pregnancy, with a Report of twenty-seven cases, by Thomas A. Ashby, M. D. Sixty Cases of Extra-Uterine Pregnancy, by Franklin S. Newell, M. D. Pelvic Hematocele and Hematoma, by Cuthbert Lockyer, M. D. (Lond.) B. S., F. R. C. S. (Eng.) The Medical Treatment of the Menopause, by Reynold Webb Wilcox, M. D., LL. D. Syphilitic Neuritis of the Optic Nerve with Impending Blindness successfully treated with calomel injections, by Louis Jullien, B. D. A Contribution to the Study of Eosinophilia, by Charles E. Simon, M. D. These articles are well illustrated with plates and figures with one colored plate on Psoriasis. These papers are original, well prepared, and well written, making them of much more value than the ordinary clinical lectures. The careful reading and study of the same will be of great aid to the profession.

County Societies in Affiliation with the State Medical Association

County.	President	Address of President.	Secretary	Address of Secretary
Adair	James Hanks	Brashear	E. C. Grim	Kirksville
Andrew	D. B. Bryant	Savannah	C. O. Jeffries	Savannah
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Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico.
Barton	G. D. Allee	Lamar	T. L. McComb	Lamar.
Bates	I. R. Coulson	Spruce	E. N. Chastain	Rich Hill.
Benton	G. S. Greeson	Lincoln	S. O. Davis	Warsaw.
Boone	I. E. Thornton	Columbia	W. A. Norris	Columbia.
Buchanan	P. I. Leonard	St. Joseph	Chas. W. Fassett	St. Joseph.
Butler	I. J. Norwine	Poplar Bluff	Ira W. Seybold	Poplar Bluff.
Caldwell	R. K. Dodge	Palo	Tinsley Brown	Hamilton.
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Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek.
Cape Girardeau	H. L. Cunningham	Cape Girardeau	L. D. Porterfield, Jr.	Cape Girardeau.
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton.
Carter-Shannon	F. Hyde	Eminence	T. A. Chilton	Van Buren.
Cass	G. W. Farrow	East Lynne	W. F. Chaffin	Raymore.
Cedar	Kimball Hill	El Dorado Springs	T. W. Dawson	El Dorado Springs.
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Clark	H. W. Harris	Winchester	A. C. Bridges	Kahoka.
Clay	L. J. Jones	Linden	F. H. Matthews	Liberty.
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg
Cole	G. Ettmueller	Jefferson City	A. W. McAlester	Jefferson City.
Cooper	O. W. Cochran	Gooch Mill	I. R. Lionberger	Boonville.
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville.
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin.
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett.
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle.
Gasconade-Maries-Osage	I. J. Ferrell	Owensville	I. W. Niewee	Lois.
Gentry	G. W. Whiteley	Albany	I. N. Conrad	Albany.
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Grundy	N. E. Sutton	Trenton	W. H. Winningham	Trenton.
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Henry	W. H. Benway	Deepwater	R. D. Haire	Clinton.
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Howell	A. H. Thompson	Lanton	A. H. Thornburgh	West Plains.
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton.
Jackson	Robt. T. Sloan	Kansas City	Max Goldman	Kansas City.
Jasper	I. D. Pifer	Joplin	R. M. James	Joplin.
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Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington.
Lawrence	I. A. Harris	Mt. Vernon	C. A. Moore	Aurora
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy.
Linn	I. W. Mason	Brookfield	Foster Burke	Laclede.
Livingston	I. E. Tracy	Chillicothe	I. E. Cherrington	Chillicothe.
McDonald	E. F. Doty	Anderson	M. T. Sellers	Anderson.
Macon	W. H. Miller	Macon	C. W. Reagan	Macon.
Madison	C. A. Anthony	Fredericktown	S. C. Slaughter	Fredericktown.
Marion	Richard Schmidt	Hannibal	H. L. Banks	Hannibal.
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton.
Miller	S. P. Hickman	Ulman	G. D. Walker	Eldon.
Mississippi	G. R. Wallace	Bertrand	R. K. Ogilvie	Charleston.
Moniteau	I. M. Robertson	Latham	W. R. Patterson	Tipton.
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris.
Montgomery	I. L. Jones	Jonesburg	W. M. Wheeler	High Hill.
Morgan	W. L. Hatler	Barnett	I. T. Beale	Versailles.
New Madrid	Welton O'Bannon	New Madrid	C. W. Watson	New Madrid.
Newton	R. L. Wills	Neosho	Horace Bowers	Neosho.
Nodaway	F. R. Anthony	Maryville	L. E. Dean	Maryville.
Pemiscot	I. G. Luten	Caruthersville	John Johnson	Hayti.
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville.
Pettis	W. C. Overstreet	Sedalia	W. I. Ferguson	Sedalia.
Phelps	W. H. Bruer	St. James	S. L. Bavsinger	Rolla
Pike	M. O. Biggs	Bowling Green	T. Guy Hetherlin	Louisiana.
Platte	C. H. Chastain	Weston	G. C. Coffey	Platte City.
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker.
Putnam	C. H. Carryer	Hartford	T. A. Townsend	Unionville.
Ralls	W. S. Harwood	Rensselaer	T. J. Downing	New London.
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Ray	L. D. Greene	Richmond	E. F. Higdon	Richmond.
Reynolds	I. M. Lowrey	Centerville	T. W. Chilton	Corridon.
Ripley	S. A. Proctor	Doniphan	I. F. Redwine	Doniphan.
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall.
St. Charles	I. R. Mudd	St. Charles	B. K. Stumberg	St. Charles.
St. Clair	W. Cline	Appleton City	E. D. Miles	Osceola.
Ste. Genevieve	C. Moore	St. Marys	R. W. Lanning	St. Genevieve
St. Louis	Geo. Homan	Odd Fellows Building	Hart Godloe	Vanol Building.
St. Louis Co.	Howard Carter	Webster Groves	R. D. Moore	Central.
Schuyler	I. T. Jones	Queen City	H. E. Gerwig	Downing.
Scotland	A. L. Davis	Arbela	O. F. Pile	Memphis.
Shelby	L. W. Dallis	Hunnewell	A. M. Wood	Lentner.
Stoddard	D. R. Corbin	Bloomfield	John Ashley	Bloomfield.
Sullivan	I. C. Kessinger	Milan	I. S. Montgomery	Milan.
Vernon	E. A. Dulin	Nevada	T. B. Todd	Richards.
Warren	W. J. Alexander	Marthasville	E. A. Fluesmeier	Wright City.
Washington	I. A. Eaton	Belgrade	W. S. Smith	Belgrade.
Wayne	I. P. Sebastain	Patterson	R. I. Owens	Mill Spring.
Worth	O. H. P. Mills	Grant City	J. K. Phipps	Grant City.

MEETINGS OF THE COUNTY MEDICAL SOCIETIES

County.	Date of Meeting.
Adair	Quarterly. Last Tuesday, Jan., April, July, Oct.
Andrew	Monthly. First Wednesday.
Atchison	Quarterly. January, April, July, October.
Audrain	Monthly. First Monday.
Barton	Quarterly. First Thursday, May, Aug., Nov., Feb.
Bates	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Benton	Quarterly. First Tuesday, January, April, July, October.
Boone	Monthly. First Monday.
Buchanan	Semi-Monthly. First and Third Saturday.
Butler	Monthly. Last Friday.
Caldwell	Quarterly. July, October, January, April.
Callaway	Monthly. Second Thursday.
Camden	Quarterly. Second Monday, April, July, Oct., and Jan.
Cape Girardeau	Monthly. Second Wednesday.
Carroll	Monthly. Second Tuesday.
Carter-Shannon	Quarterly. February, May, August and November.
Cass	Quarterly. First Thursday of March, June, Sept. and Dec.
Cedar	Monthly.
Chariton	Monthly. Last Thursday.
Clark	Bi-Monthly. First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay	Monthly. Last Monday.
Clinton	Monthly. First Tuesday.
Cole	Quarterly. Second Thursday of Jan., April, July, Oct.
Cooper	Monthly. First Tuesday.
Crawford	Quarterly. First Tuesday, April, July, October, January.
Daviess	Quarterly. January, April, July, October.
Dunklin	Monthly. Second Tuesday.
Franklin	Monthly. First Tuesday.
Gasconade-Maries-Osage	Semi-Annual. Fourth Thursday, April and October.
Gentry	Monthly.
Greene	Semi-Monthly. Second and Fourth Friday.
Grundy	Quarterly. July, October, January, April.
Harrison	Quarterly. Third Tuesday, January, April, July, October.
Henry	Quarterly.—Second Wednesday, Dec., March, June, Sept.
Holt	Quarterly.—First Thursday, January, April, July, October.
Howard	Monthly. First Friday.
Howell	Bi-Monthly. First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron	Monthly. First Saturday.
Jackson	Semi-Monthly. Second and Fourth Thursdays.
Jasper	Semi-Monthly. First and Third Mondays.
Jefferson	Monthly. Fourth Tuesday.
Johnson	Quarterly. June, September, December, March.
Knox	Monthly. First Monday.
Laclede	Quarterly. Second Monday, Jan., April, July, Oct.
Lafayette	Monthly. Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lawrence	Monthly.
Lincoln	Quarterly. May, August, November, February.
Linn	Quarterly. October, January, April, July.
Livingston	Monthly. Third Wednesday.
McDonald	Quarterly. Second Wednesday, Jan., April, July, Oct.
Macon	Monthly. Second Tuesday, 10 a. m.
Madison	Semi-Monthly. First and Third Tuesday.
Marion	Monthly. First Friday.
Mercer	Monthly. Second Thursday.
Miller	Quarterly. First Thursday, March, June, Sept., Dec.
Mississippi	Monthly. First Monday.
Moniteau	Quarterly. March, June, September, December.
Monroe	Quarterly. First Tuesday of April, July, October, January.
Montgomery	Monthly.
Morgan	Quarterly. First Wednesday of March, June, Sept., Dec.
New Madrid	
Newton	Monthly. Second Tuesday.
Nodaway	Monthly. Second Tuesday.
Pemiscot	Quarterly. First Tuesday, January, April, July, November.
Perry	Monthly. First Wednesday.
Pettis	Semi-Monthly. First and Third Monday.
Phelps	Quarterly. March, June, September, December.
Pike	Monthly.
Platte	Monthly. First Wednesday.
Pulaski	Quarterly. November, February, May, August.
Putnam	Monthly. First Wednesday.
Ralls	Quarterly. January, April, July and October.
Randolph	Monthly. Second Tuesday.
Ray	Monthly. Third Wednesday.
Reynolds	Quarterly. January, March, June, October.
Ripley	
Saline	Monthly. Second Tuesday.
St. Charles	Monthly.
St. Clair	Quarterly. Second Tuesday, March, June, Sept., Dec.
Ste. Genevieve	Monthly. Second Wednesday.
St. Louis	Weekly. Saturdays.
St. Louis County	Monthly. Second Wednesday.
Schuyler	Semi-Annually. July and December.
Scotland	Monthly. Second Tuesday.
Shelby	Quarterly. June, September, December, March.
Stoddard	Bi-Monthly. First Wednesday, Jan., Mch., July, Sept., Nov.
Sullivan	Monthly.
Vernon	Quarterly. First Tuesday, March, June, Sept. and Dec.
Warren	Monthly.
Washington	Monthly. First Saturday.
Wayne	Monthly.
Worth	Monthly. Second Wednesday.